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POP LEGEND CALLS FOR ACTION

Building Respect for IP: Sustainable Solutions to a Global Problem

Sixth Global Congress on Combating
Counterfeiting and Piracy
2-3 February 2011 — Paris, France

The Director General of the World Intellectual Property Organization, Mr. Francis Gurry, the Secretary General of INTERPOL, Mr. Ronald Noble and the Secretary General of the World Customs Organization, Mr. Kunio Mikuriya invite you to attend the Sixth Global Congress on Combating Counterfeiting and Piracy to be held in Paris on February 2 and 3, 2011.

Counterfeiting and piracy are global problems that affect us all. They threaten the health and safety of consumers, deprive national economies of vital tax revenues, embolden criminal organizations and erode respect for intellectual property rights.

The aim of the Sixth Global Congress is to build cooperation for enhanced public awareness – and concerted action – to successfully confront these problems. It seeks to create a better understanding of the elements fuelling the trade in illegitimate goods and to develop sustainable solutions to stop it.

Discussion will be wide-ranging – from the growing menace associated with internet trade to the role of corporate responsibility in nurturing respect for IP. It will be anchored in the theme of the Congress, to find sustainable solutions that take account of the role and rights of stakeholders, as well as the cost to them, of fighting counterfeiting and piracy.

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PROMOTING INNOVATION AN ECONOMIC PERSPECTIVE

Against the backdrop of one of the world's most serious and widespread economic crises, and a rapidly evolving technological and geo-economic landscape, governments and businesses around the globe are grappling with an abiding question – how to promote innovation, secure economic growth and boost development. In this interview WIPO's Chief Economist, **Carsten Fink**, explores economic perspectives on the role that IP plays in promoting innovation, growth and development.

As WIPO's first Chief Economist, what does your role involve?

Throughout history, economic development has been a key motivating factor for governments to protect intellectual property (IP) rights. This was already the case in 1474 when the Republic of Venice issued a decree by which new and inventive devices could obtain legal protection against copying from third parties. It is still the case in today's world, in which the inputs of intangible assets (knowledge, information and ideas) have become fundamental to the production of most goods and services.

Of course, the role of the IP system has evolved over the centuries and continues to change maybe faster than ever before. New technologies and new business models emerge to challenge established IP policies and practices. The biotechnology revolution in the life sciences and the widespread adoption of modern information and communication technologies by businesses and consumers illustrate some of these challenges. Greater economic integration, in turn, calls for new approaches to the international governance of what are still largely national IP rights.

Against this background, the role of the Chief Economist is to inform WIPO member states and the public at large about ongoing trends in the IP system and to analyze how different IP policy choices affect the economic performance of countries. Drawing on the statistical data which have long been collected by WIPO, my colleagues in the recently created Economics and Statistics



Photo: C. Fink

Division and I seek to generate new empirical evidence on policy questions affecting member states. We also work closely with academic economists and seek to mobilize their expertise for policy-relevant IP research.

Why was it considered important for WIPO to strengthen its focus on the economics of IP?

As an economist, I would, of course, argue that such a focus was long overdue. More objectively, there is greater demand from policymakers for economic analysis now than there was two or three decades ago. Usage of the patent and trademark systems has reached historically unprecedented levels. Companies in a larger number of sectors and from a larger number of countries look to the IP system to build and sustain a competitive edge. Also, many IP-related questions have moved to the forefront of public policymaking—just observe the recent discussions on IP and climate change or Internet file-sharing. Finally, the conclusion of the World Trade Organization's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) has triggered many legislative reforms, especially in developing countries, prompting questions about their economic effects.

Looking more specifically at WIPO, the adoption of the Development Agenda in 2007 was an important milestone, resulting in stepped-up assessment and evaluation of IP policies. In addition, one of the nine Strategic Goals approved by member states in 2008 envisages WIPO becoming

ing a “world reference source for IP information and analysis.” This Strategic Goal is also included in the Medium Term Strategic Plan covering the period 2010-2015 that was recently submitted to member states. Against these developments, it was only natural for the Organization to strengthen its focus on economic analysis.

Not surprisingly, this greater emphasis on economic analysis is not confined to WIPO. A number of IP offices have in recent years created chief economist, or similar, positions—notably the European Patent Office and the national IP offices in Australia, Canada, France, Switzerland, the United Kingdom and the United States. We recently launched an economists’ network involving all these offices and very much look forward to collaborating with them.

What initiatives are you launching?

Let me mention a few. We’ve created a Seminar Series, to which we invite economists from around the world to present their latest research to the Geneva IP community. The idea is to stimulate an economics-focused discussion on current IP policy topics—ranging from patenting of financial innovations to transaction costs and copyright. We’ve been fortunate to have had presentations from prominent economists such as Josh Lerner from Harvard Business School and Hal Varian, Google’s Chief Economist in that Series.

We’re also developing an annual analytical report that seeks to convey current economic thinking on a given IP-related topic to an audience of policymakers. This will complement our annual statistical report—World Intellectual Property Indicators—that summarizes trends in the use of IP around the world.

Finally, the WIPO Committee on Development and Intellectual Property approved, in April 2010, a three-year research project on IP and socio-economic development. I am especially excited about this project, as it will enable us to work with some of the brightest economists from around the world to improve our understanding of the IP-development nexus. Compared to most developed countries, where numerous academic researchers and think tanks study the function of the IP system, lit-

tle economic research capacity exists in most developing countries, so I hope we can contribute to filling a gap with this project.

What is the current thinking about the link between IP, growth and development?

This is an interesting question. Let me back up here and first ask: what do we know about why certain countries, as opposed to others, achieve high rates of economic growth at a particular point in time? It turns out that development economists do not have a simple answer to this question. There is a plausible explanation behind many success stories—for example, high savings rates in China; sustained investment in human capital in the Republic of Korea or Singapore; sound management of natural resources in the case of Norway. However, these explanations are invariably partial and many economies that have exhibited similarly good pre-conditions have failed to generate high growth rates. One thing is sure, if there were a foolproof recipe for rapid economic development, policymakers would have already cooked-up the ingredients.

This is not to say that economic policy, including IP policy, is irrelevant. We know that innovation is critical for sustained economic growth, especially for countries that have exhausted their catch-up potential by rapidly accumulating physical and human capital. We also know that companies react to the incentives created by a country’s policy framework. But it is the combination of policies in relation to country-specific circumstances that matters. From this viewpoint, it is probably unrealistic to think that there will ever be a one-line answer to the question: is IP good or bad for development? A far more relevant question is: under what circumstances can a given type of IP policy support innovation and company growth in countries at different stages of development? It is on this latter question that we hope to generate new evidence within the context of the project I just mentioned on IP and socio-economic development.



In which areas is there a pressing need for further research and why?

There are many, but let me focus on two. One of the biggest challenges facing the international IP community is the large backlog of unprocessed patent applications in many IP offices. Intuitively, we know that the increased pendency times associated with these backlogs create uncertainty. This undermines the innovation objective which is at the heart of the patent system. Yet, it is quite clear that the implications of this uncertainty differ across sectors. For small startup companies seeking venture capital financing, securing patent rights at an early stage in the research and development (R&D) process is critical. For larger companies facing longer R&D cycles, processing delays may be less significant, but competing companies are exposed to uncertainty about which technologies may become subject to patent rights. As policymakers seek to tackle the large patenting backlogs, more empirical studies are needed to better understand the effects of longer pendency times on the nature and extent of the R&D activities of companies operating in different sectors.

A second example concerns the use of IP rights beyond their acquisition. We know relatively little about this. For example, what are the circumstances under which firms exploit their IP assets in-house or license them to other companies? Similarly, what are the circumstances under which firms exploit their IP assets internationally by setting up foreign subsidiaries rather than licensing them to local companies in a foreign country? One of the biggest challenges in generating credible empirical evidence to clarify these questions is the lack of data. IP filings and grants leave a statistical trace, whereas licensing transactions between private parties typically do not. New research will invariably entail the construction of new databases built on original data collection. As policymakers seek to better understand the functioning of national and international "knowledge markets," there is a growing need for such databases.

How useful are IP statistics and what do they tell us?

IP statistics are useful, for two reasons. First, they assist national and regional IP offices in operational planning (the same holds for WIPO in relation to the WIPO-administered filing and registration treaties). They help answer questions such as: in light of the incipient economic recovery, what level of IP filings can we expect in 2011? Given anticipated filing growth, how many patent or trademark examiners should be hired?

Second, IP statistics are one of the few metrics we have for measuring innovation, an activity that otherwise leaves little trace. Clearly, the number of patents filed or granted is an imperfect indicator of how innovative companies or national economies are. For instance, inventor surveys have documented a "skewed" distribution of patent values, with a relatively small share of patents accounting for a relatively large share of the value of all patents granted. In addition, certain forms of innovation – service innovations, say, or adaptive inventions by indigenous communities – fall outside the IP system. That said, IP statistics offer useful insights into technological trends – for example, they can indicate which countries and which companies have emerged as leaders in certain fields of technology, fuel cell technology, for example. Combined with information on company characteristics, IP statistics can also help explain the innovation process itself – such as how ideas spread geographically and over time.

Will your work as WIPO's Chief Economist focus exclusively on patents?

No. Certainly, patent rights receive much prominence in the policy discourse on innovation. However, trademarks, geographical indications, and industrial designs pose important policy questions in their own right. These are frequently neglected in the academic community. In addition, economists have interesting things to say about the functioning of the copyright system, especially in relation to digital works.

Of course, we are still a new Division and we have to set priorities. Nonetheless, I hope that over the years, we will be able to contribute in all areas of IP.

IP'S ONLINE MARKET THE ECONOMIC FORCES AT PLAY

Photo: H. Varian



Bio

Hal R. Varian is the Chief Economist at Google, where he started as a consultant in 2002. He has been involved in many aspects of the company's activities, including auction design, econometrics, finance, corporate strategy and public policy.

He is emeritus professor at the University of California, Berkeley – at the School of Information, the Haas School of Business and the Department of Economics. He has published numerous papers on economic theory, econometrics, industrial organization, public finance, and the economics of information technology. Professor Varian has written two bestselling textbooks entitled *Intermediate Microeconomics* and *Microeconomic Analysis*. Ranked by Accenture as one of the top 10 business gurus in 2002, he is co-author of *Information Rules: a Strategic Guide to the Network Economy*.

In 2010, WIPO launched a Seminar Series on the Economics of Intellectual Property (IP) to explore the interface between the two areas. At the September seminar, Professor Hal Varian, examined the economic forces at play in the online market for IP. He focused on how to encourage legitimate transactions of online content by reducing the costs associated with identifying IP right owners.

Digital technologies have fuelled an “information explosion” and transformed copyright’s operating landscape, blurring traditional relationships and creating new ones as new online services appear almost daily. While facilitating the dissemination of creative content – an original tenet of copyright law – this rapidly evolving landscape presents many copyright challenges, particularly in terms of returning value to authors and harnessing the economic benefits of online content – the other principle underpinning copyright law.

Information explosion

In the digital era, the costs of reproducing, storing and disseminating creative content have fallen dramatically. Computation costs are estimated to have fallen by 1 to 5 trillion times in the last 100 years,² Professor Varian explained. This has spurred unprecedented growth in the information available, with striking increases in professional content and user-created content as well as that produced or accessed illicitly – pirated content. “This dramatic reduction in cost has led to an equally dramatic increase in output,” he noted, citing a recent study³ that put per capita consumption of information in the industrialized world in 2009 at around 34 gigabytes per day.⁴ While tracing works pre-dating the digital age is difficult, identifying owners of “digitally born” works promises to be less so as these works are now typically recorded when they appear on digital networks.

The costs of securing and managing legitimate transactions of protected material – transaction costs¹ – have soared recently, largely because of difficulties in identifying copyright owners. “There are many valuable transactions between buyers and sellers... that don’t take place because of the transaction costs of identifying the appropriate owner,” Professor Varian explained. He said, “as economists we look at value in transactions... and transaction costs are like sand in the gears; [they] slow them down or prevent things from happening. So it’s important from an economic perspective to try to minimize transaction costs.”

Orphan works

Under copyright law, there is no requirement to register a creative work; protection is immediate and automatic. According to the Professor, this, coupled with an extended term of copyright pro-

1 Transaction costs – expenses associated with making an economic exchange – the time, money and energy involved in concluding a deal.

2 http://nordhaus.econ.yale.edu/prog_083001a.pdf

3 http://hmi.ucsd.edu/howmuchinfo_research_report_consum.php

4 An average web page (including graphics) is about 50 kilobytes – so 1 gigabyte is roughly the equivalent of 20,000 web pages.



tection,⁵ has increased search costs and fuelled an orphan works problem. An “orphan work” is unavailable for commercial use or digitization because the right owner cannot be identified or located. Sometimes it is obvious who the owner is, but often it is not – rights may be transferred for a variety of reasons and the identity of the original creator or subsequent right owner may be unknown. Professor Varian noted that identifying the legitimate right owner and securing the relevant rights can prove a difficult, time-consuming and costly affair. This puts a brake on transactions and, even when they do occur, the associated high search costs “limit the value that is inherent in the copyrighted work,” he said. This issue is of particular concern to Google, he explained, given its endeavor to “make every book ever written available to every person on the earth,” under the Google Books Project. “We are at this critical juncture where we have to figure out some way to deal with the past,” he added.

5 The international minimum under the Berne Convention for the Protection of Literary and Artistic Works is 50 years after the death of the author, but in many jurisdictions it is now 70 plus years.

6 See www.copyright.gov/fedreg/2005/70fr3739.html

7 Erroneously asserting ownership over a work and licensing it to a user.

Professor Varian discussed options for ensuring that buyers and sellers share the search cost burden in the IP market, to encourage economic transactions. He noted that economic wisdom dictated that “the party with the lowest search cost should end up doing most of the search.” He reflected on the merits of YouTube’s voluntary content identification system that allows right holders to monetize, track or block the content they upload onto YouTube. Professor Varian believes this partnership very successfully connects content providers and users – it currently governs billions of pieces of online content. By tracking content, additional “marketing and monetization” opportunities are created as providers monitor usage of their content. Though an *ad hoc* solution, Professor Varian noted “it gives an idea of what could be done.”

Possible solutions

If a protected work could only be used upon explicit identification of the owner, and that owner is impossible or difficult to find, “no one would be able to make use of that particular piece of IP” he said. Citing proposals by the U.S. Copyright Office,⁶ he suggested a requirement to perform a “reasonably diligent search” to locate a right holder presents an economically efficient compromise. If, after a “diligent search,” the right holder cannot be identified then a work may be used by a licensee without prejudice. Should the right holder subsequently be found, then he or she would qualify for “reasonable compensation” along the lines of what might have been negotiated prior to the use

of the work. Such a solution ensures that buyers receive some benefit in being able to use the IP if a search fails; if it succeeds, they can negotiate use of the IP. Failure to conduct a search would result in infringement costs. If sellers are easy to find, they benefit by concluding a transaction; if they are hard to find, they bear the cost of the fact that no transaction is likely to occur and lose the right to apply for an injunction or collect damages.

Professor Varian said that a liberal “safe harbor” provision to address instances of ambiguity in ownership⁷ was desirable to encourage owners to come forward. “After all, the value is in making the transactions happen,” he noted. “Unlimited liability would essentially result in no transaction taking place whatsoever,” he explained. High damage awards might discourage “legitimate uses due to ambiguities in ownership,” and risk creating an incentive “to seek to be injured.” This, he underlined, called for “a balancing of... interests in the construction of costs of infringement.”

Registries and copyright clearinghouses, he said, were useful in connecting buyers and sellers, reducing transactions costs and facilitating IP-related business deals.

Registries versus copyright clearinghouses

Registries facilitate the identification of right owners and open the possibility for negotiations to occur. This, however, might push prices up “because, once you have located a potential transaction, the cost of finding another seller... could be prohibitive.”

Copyright clearinghouses were more economically advantageous, he argued, as they identify owners and “enable transactions to actually take place” by clearing rights. By indicating the prices involved they “generally lead to a more competitive market” and also allow for more efficient pricing – e.g. bundling or quantity pricing – and increased transactions.

The Professor favored a voluntary industry-standardized system for content recognition to help reduce “frictions” in the commercial exchange of legitimate content. “There is a great advantage to standardization,” he noted. Its downside, however, is that “a single standardized system presents a fixed target for hackers.” For the moment, he pragmatically advocated experimenting with “different solutions.”

MANAGING IP AT CERN



Photos: CERN

Left: View of the LHC tunnel

Top: Aerial view of CERN

After several years of experience in the field of technology transfer, the European Organization for Nuclear Research (CERN) recently formalized a policy linked to its technology transfer activities. In this article, *CERN's Knowledge and Technology Transfer Group* outline the details of that policy.

Basic science is the primary driver of innovation. That much is simple. But ensuring that technologies developed in the name of basic science turn into useful innovations for society is a much harder nut to crack. CERN's commitment to transferring knowledge and technology to society dates back to the early days of the laboratory, as does the question of whether or not to protect its intellectual property (IP).

Can IP be protected while preserving the openness that characterizes the fundamental research environment?

To better understand the issue, it is worth pointing out that the "open science" model, within which CERN typically operates, relies on full and timely disclosure of findings and methods. This model recognizes that scientific progress and the expansion of technological knowledge is a cumulative process, according to which scientists "stand on the

shoulders" of previous researchers to advance their own research. For this reason, CERN publishes the results of its experimental and theoretical work and makes them widely available.

Some consequences of this approach became evident when CERN developed the control system for the Super Proton Synchrotron (SPS) which came on-stream in 1976. The SPS was the first of CERN's accelerators to have a computerized control system. Those developing it came up with the concepts of touch screens and trackballs – ideas that were well ahead of their time.

“Fundamental science is where new ideas and methods begin that later become commonplace”

CERN's main computer supplier was interested, but unable, to invest in the project unless CERN committed not to disclose the technology to third parties. Such a proposition flew in the face of the open science model, and so trackballs and touch screens stayed in the control room. These technologies were put on hold and had to be reinvented and brought to market years later. Was this a missed opportunity, or just an idea ahead of its time?

The World Wide Web marked a turning point in CERN's approach to IP and industrial innovation. On April 30, 1993, Tim Berners-Lee persuaded



CERN's management to place it into the public domain. Thanks to this simple gesture – that has effectively revolutionized social, cultural and economic behavior and transformed business structures – the world has a single seamless tool for accessing information online. CERN did not try to harness the economic value of the web or to draw financial revenue from it. It decided to make its IP freely available to everyone.

Had CERN tried to limit access to the web in one way or another, it is more than likely that the world would now have a jumble of different systems for accessing information online, rather than a common standard. These examples clearly illustrate how the activities related to CERN's basic research program may have applications in domains beyond particle physics.

Acknowledging the importance of knowledge and technology transfer, in the late 1990s, CERN's member states expressed their wish to make their Organization's IP available to research institutes and industry in their respective countries (see *WIPO Magazine* 6/2008).

In response, CERN established a technology transfer office and actively sought to identify technologies ripe for development. There have been suc-

cesses, such as Large Hadron Collider (LHC) vacuum technology adapted to solar energy; and new electronics for particle detectors that have led to the development of combined PET/MRI scanners for cancer treatment planning.



Photo: iStockphoto/Mark Kostich

These two examples demonstrate how patenting and licensing of IP have worked for CERN, for the technologies concerned and, ultimately, for humanity.

CERN has not limited itself to a conventional patenting and licensing approach but has developed successful collaborations with other institutes and industry to further develop its technology for applications in industrial processes or products. The successful Medipix collaboration is a striking example. The silicon detector developed by Medipix has

About CERN

Founded in 1954, CERN is the world's leading laboratory for particle physics. It is located on the Franco-Swiss border near Geneva and was one of Europe's first joint ventures. It has 20 European member states, but many non-European countries are also involved in different ways. Scientists from some 580 institutes and universities around the world use CERN's facilities.

Its business is to find out what the universe is made of and how it works. At CERN, the world's largest and most complex scientific instruments (such as the LHC) are used to study the basic constituents – or fundamental particles – of matter. By studying what happens when these particles collide, physicists learn about the laws of nature.

The Large Hadron Collider

The LHC was built to help scientists answer key unresolved questions in particle physics. This gigantic scientific instrument, which spans the Franco/Swiss border some 100 meters underground, is a particle accelerator. It is used by physicists to study the smallest known particles – the fundamental building blocks of all things. Physicists are using the LHC to recreate the conditions that occurred just after the Big Bang, by colliding two beams of subatomic particles, known as "hadrons," head-on at very high levels of energy. Teams of physicists from around the world are analyzing the particles created in the collisions, using special detectors in six experiments dedicated to the LHC.

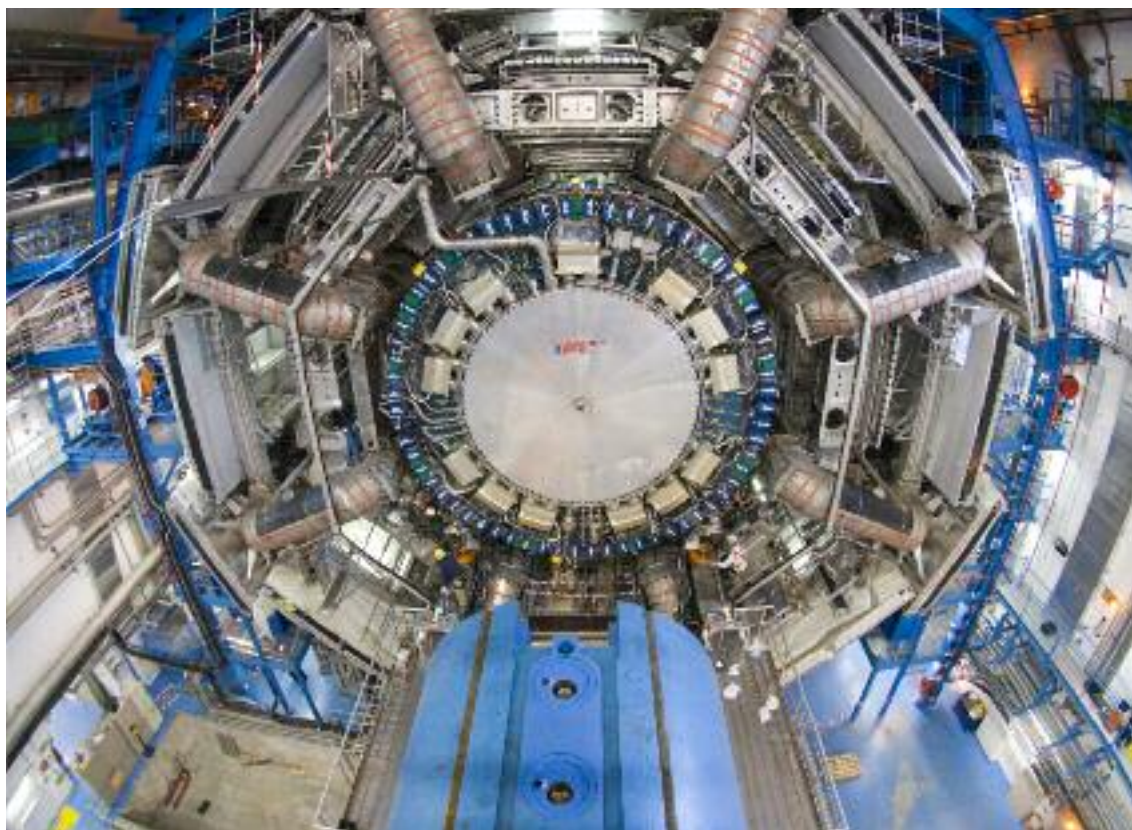


Photo: SAIC

View
of detector
ATLAS

found application in many fields, including color scanning for medical diagnostics, material analyses, gamma cameras, and dosimetry.¹ Adequately defining the rules governing IP and commercial exploitation from the outset has proven a key factor in the success of the collaboration and the dissemination of its technology.

Over the last decade, CERN's technology transfer journey has featured situations involving seemingly conflicting objectives:

- building CERN's IP assets without compromising the open science model;
- generating revenue while maximizing dissemination of technologies;
- providing exclusivity where important investments are required for technological development without favoring any one company;
- encouraging staff to identify technology transfer opportunities without impairing CERN's scientific program.

On the basis of its past experience, and following discussions with other European technology transfer experts, CERN recently formalized an IP management policy for its technology transfer activities. Approved in March 2010, the policy strives to balance the Organization's objectives in terms of IP

management with its commitment to disseminate and transfer technology.

The principles governing IP management within the framework of CERN's scientific program are outlined, as are those governing technology transfer, in relation to partnerships and commercial exploitation of the IP. The policy also features an incentive scheme designed to encourage and support technology transfer while ensuring that commercial interests do not override or impinge upon CERN's scientific program. Revenues generated from the commercialization of CERN technologies are divided among the group responsible for developing the technology, the related department and a special fund to support further technology transfer initiatives.

The policy states that IP management is to be undertaken in a manner compatible with collaborative and open research or open science.

In practice, CERN endeavors to minimize delays in publication whenever patent protection is sought. Patenting is seen as a means, not an end. Patent protection will only be considered under certain circumstances, namely, when an invention is considered to have the potential for commercial ex-

¹ Dosimetry: a scientific subspecialty in the fields of health physics and medical physics that is focused on the calculation of internal and external doses of ionizing radiation.



ploitation or when it is believed that patent protection will facilitate its transfer or make the invention more attractive to companies. In any case, protected inventions are made freely available to academic institutes for research purpose. Also, the technology transfer partnership agreements signed by CERN with other institutes and/or industry always include provisions ensuring free access to all results necessary for the execution of CERN's scientific program.

CERN's IP management policy stipulates that priority is always given to CERN's scientific program. Technology transfer partnerships are subject to the availability of key personnel and adequate resources.

CERN remains committed to maximizing the dissemination of its technologies. In the event of a conflict between revenue generation and dissemination, dissemination takes precedence. Concretely, CERN will only consider certain types

of exclusivity if it believes that this is a prerequisite for the company to invest in CERN technology, or where the technology is developed with a licensee's financial support. Commercial licenses granted by CERN aim to capture a fair share of the revenues generated through the technology's commercialization.

Other elements of the policy are directly related to CERN's convention, such as the rule forbidding any technology transfer for military applications, or to the limits and legal framework pertaining to its international status.

CERN's recent agreement with WIPO will allow each organization to benefit from the other's experience. CERN is already taking part in WIPO's technology licensing training program, where its experience in managing IP and technology transfer is used to demonstrate the possible uses of IP in basic research settings.

About Medipix



Scientists at CERN have designed microchips that can be combined with semiconductor sensors to detect, track and/or identify high-energy particles – the basic building blocks of the universe.

Both the sensors and the microchips – which together form a detector – are divided into tiny sensitive elements (pixels), similar to those in a digital camera. The detectors produce images with high resolution, high contrast and almost no noise. They are so sensitive that they can detect individual X-ray photons (electromagnetic radiation, including visible light and X-rays, is made up of particles called photons).

Medipix is a spin-off of the electronics developed for detectors used at the Large Hadron Collider. CERN researchers saw the potential for transferring this technology outside the high-energy physics domain.

Today, through the Medipix collaborations composed of over 17 research institutes and universities worldwide, Medipix detectors are widely used in many different fields, including material analysis, electron microscopy, and medical imaging for cancer detection, as well as in numerous other medical and biological applications.

Learn more at: <http://medipix.web.cern.ch/MEDIPIX/>

WIPO MEMBER STATES ENDORSE REFORMS

This year's meetings of WIPO's Assemblies – which saw the participation of 64 ministers as well as delegations from 184 member states – were unique, featuring the appearance of iconic singer-songwriter Stevie Wonder. The musician's impassioned plea for governments to reach agreement on enhanced accessibility of copyright content for persons with physical disabilities set the tone of the meetings which went on to endorse reforms led by Director General Francis Gurry.

Director General underscores role of innovation

The role of innovation in promoting economic growth and competitiveness and significant changes in the global innovation landscape were the focus of the Director General's opening remarks. "Innovation is central to economic growth and to the creation of new and better jobs. It is the key to competitiveness for countries, for industries and for individual firms. It is the process by which solutions are developed to social and economic challenges," Mr. Gurry told ministers and delegates participating in the two-day, high-level segment of the Assemblies.

High-level segment

Over 64 ministers shared their national experiences on "Innovation, Growth and Development: The Role of Intellectual Property (IP)." Ministers underscored the importance of IP in supporting the search for solutions to the many challenges confronting their countries. They emphasized the need for a balanced IP system to create a secure environment for investment in innovation and highlighted the importance of implementing national IP strategies to effectively manage IP assets for development.

Innovation is also "the reason why we have intellectual property" he noted. Adding that it provides the incentive for the significant "investment of time, effort and human and financial resources" associated with the process of innovation and its many benefits.

The growing complexity of "the journey from idea to commercial reality," Mr. Gurry noted, has led to "a broadening of the understanding of what constitutes innovation." He said that organizational, marketing and design – in addition to technological – knowledge were vital to successful innovation. "Intellectual property is also central to these other dimensions of the enlarged notion of innovation," he observed.

Pointing to changes in the global innovation landscape, he said "Both the geography of innovation and the means by which innovation occurs are changing, overturning many of our assumptions and expectations." Trends in economic growth and patterns of investment in education and research and development, he continued, "make it clear that further continental shifts will occur in the world of innovation and that the map of innovation will continue to evolve."

The Director General referred to the emergence of "open innovation" – a rising trend in the increasingly "networked and connected economy" – where "enterprises and institutions look outside themselves to satisfy their innovation needs

Against this backdrop, the Director General noted that "WIPO's role in developing and coordinating global infrastructure" has acquired "more importance." This is "an increasingly fertile" area for effective international cooperation insofar as it offers an opportunity to reduce the knowledge gap and increase participation by least developed and developing countries in global innovation. Mr. Gurry underscored that it also offers a "very effective means of improving both the efficiency of the work of patent offices in support of innovation and the quality of their output."

The Director General underlined the need to continue to improve the "essential support services for global innovation" offered by WIPO through its global IP systems¹ which are enjoying widespread and expanding membership. He recalled that these strategic assets generate over 90 percent of the Organization's revenue, enabling it to offer a wide range of capacity-building and development services.

¹ Patent Cooperation Treaty (PCT), the Madrid System for the International Registration of Marks, the Hague System for the International Registration of Industrial Designs and the Lisbon System for the International Registration of Appellations of Origin.



In relation to the international legal framework, he said that there were “real possibilities of concrete progress in a number of areas,” citing access to published works by the visually impaired; audiovisual performances; broadcasting; folklore and traditional knowledge (TK); designs; and trademarks on the Internet. He said that the success of such cooperation was a test of the relevance of the Organization and multilateralism to the fast-moving world of innovation.

Round-up of the Assemblies

Planning for the future

Member states welcomed the new Medium Term Strategic Plan (MTSP) which sets the broad direction for the Organization over the next five years. Developed after extensive consultations with member states, the MTSP is designed to ensure that WIPO keeps pace with the changing external environment; and delivers clear results in pursuit of its mission to promote innovation and creativity – through a balanced and effective IP system – for economic, social and cultural development in all countries.

² An interview with WIPO Director General Francis Gurry

³ TISCs are being established in Algeria, Ecuador, Morocco and Tunisia. Additional centers are foreseen in Bangladesh, Cuba, Egypt, Guatemala, Senegal and Viet Nam, and some 10 additional requests are under consideration.

Strategic Realignment Program (SRP)

WIPO's ambitious strategic change program launched in 2008 by the Director General was thoroughly reviewed, and member states welcomed progress in the implementation of a wide range of reforms. The SRP is designed to ensure that WIPO is a service-oriented organization with staff that work together with pride and integrity to deliver results for member states (see *WIPO Magazine* 5/2010²).

Enterprise Resource Planning (ERP)

The modernization of WIPO's core administrative, management and customer-service functions, which includes electronic document distribution, was fully endorsed. Member states also approved the implementation of a fully integrated ERP system for enhanced information on performance and resource utilization and welcomed the introduction of new International Public Sector Accounting Standards (IPSAS). A five-year strategy for regularizing the contractual situation of long-serving staff on short-term contracts was also approved.

Language policy

Member states agreed on a new language policy which, given its resource-intensive nature, will be implemented in phases to extend language coverage to as many WIPO forums as possible.

IP and development

Delegations reiterated their commitment to the WIPO Development Agenda and its effective implementation. They expressed particular satisfaction with the recent adoption of a coordination mechanism to support the Committee on Development and Intellectual Property (CDIP) in monitoring, assessing and reporting on the implementation of Development Agenda projects. This, together with proposals to integrate funding for Development Agenda projects into the Organization's budgetary framework, reflects “the systematic integration” of the development dimension into all areas of WIPO's work. The thematic projects, member states agreed, added impetus to their implementation. Seventeen dedicated projects, costing over CHF19 million, have been approved so far by the CDIP. Of the 45 Development Agenda recommendations, 36 are now being implemented.

In his report to member states, the Director General noted “demand has continued to rise from developing countries for assistance in building their national innovation infrastructure, and in reinforcing the capacity of their research institutions in the area of IP licensing and technology transfer.” As a response, he noted, WIPO has been working with member states to establish Technology Innovation Support Centers (TISCs).³ Mr. Gurry referred to a range of other initiatives, including practical skills workshops on technology transfer, patent drafting and technology licensing. Over 2,000 research and technology managers have benefitted from these initiatives in the past year. The WIPO Academy also attracted record numbers of applicants for its distance learning courses, organized an unprecedented 10 Summer Schools and provided over 700 scholarships for staff in IP offices.

International legal framework

The General Assembly reviewed the status of work in WIPO's various standing committees. The Director General noted the “positive atmospherics and forward movement” achieved in most committees,

resulting from the readiness of member states to “embrace practical solutions in the wider interest.”

Developments include:

- Twenty studies produced since the Standing Committee on the Law of Patents (SCP) re-initiated its work two years ago;
- The “shared desire” of member states to “make a positive difference” in facilitating access to copyrighted works for visually impaired persons (VIPs);
- Agreement by the Standing Committee on the Law of Trademarks, Industrial Designs and Geographical Indications (SCT) in June 2010, to advance work on a possible treaty for industrial design formalities and to consider new issues surrounding the use of trademarks on the Internet as well as the protection of names of states against registration or use as trademarks;
- The positive spirit of cooperation characterizing the search for a consensus on an international legal instrument (or instruments) for effective protection of TK, traditional cultural expressions (TCEs) and genetic resources (GRs). Delegates committed to continuing to actively and constructively engage in the work of the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC). They noted that the first Intersessional Working Group (IWG) meeting in July 2010 – which streamlined the negotiating text for TCEs – marked a significant step forward in the IGC’s complex negotiations.

WIPO’s Global IP Services

Patent Cooperation Treaty (PCT)

“Improving the functioning of the [PCT] system will contribute to the dual challenges faced by IP offices around the world of reducing the backlogs of 4.2 million unprocessed patent applications, and of improving the quality of granted patents,” the Director General underscored in his report to member states. The PCT Assembly noted the work being undertaken to find ways to improve the delivery of PCT services to stakeholders, particularly the positive outcome and the recommendations of the PCT Working Group’s June session. “Many of these recommendations, notably those relating to the quality of international search and preliminary examination,” Mr. Gurry noted, “seek to build on the work already underway aimed at improving the ability of national and regional offices to search prior art

from a wide range of sources and in a wide range of languages, and to share the results of those searches with other offices.” A series of studies were also commissioned to assess the success of the PCT system in disseminating technical information, facilitating access to technology and providing technical assistance to developing countries.

The Madrid and Hague Systems⁴

Continued progress has been made in streamlining the legal frameworks that govern each of these systems which facilitate the process of obtaining international protection for trademarks and designs respectively. The respective Assemblies noted steady progress in implementing information technology modernization programs.

Arbitration and mediation

“After 16 years of operations,” the Director General noted, the WIPO Arbitration and Mediation Center “occupies a prominent position in the dispute resolution landscape.” While the Center has an active practice in arbitration and mediation services in other areas of IP, the bulk of its work relates to domain names under the UDRP⁵ WIPO is now the preferred dispute resolution provider for 63 country code top level domains (ccTLDs) which account for 15 percent of all top level domain categories. Attention was drawn to the opening of the Center’s Singapore office in May 2010 as well as the introduction, in December 2009, of a paperless procedure for filing cases electronically, which is generating significant savings, in the region of 1 million paper pages per year. The Center continues to engage with and monitor processes associated with the planned expansion of top-level domains.

Conclusion

In closing the meeting, Mr. Gurry said “we started on notes of harmony with Stevie Wonder, and that harmonious atmosphere has continued throughout the Assemblies.” He thanked ministers for their participation in the high-level segment, which reflected “a high-level political engagement and interest in the Organization’s work.” The Chair of the WIPO General Assembly, Ambassador Alberto Dumont⁶ welcomed the positive outcome of the Assemblies which he said had been “extremely fruitful.”

⁴ The Madrid System for the International Registration of Marks and the Hague System for the International Registration of Industrial Designs.

⁵ UDRP – Uniform Domain Name Dispute Resolution Policy

⁶ Argentina’s Permanent Representative to the United Nations and other International Organizations in Geneva

POP LEGEND CALLS FOR ACTION

American pop legend Stevie Wonder added star quality to this year's meetings of WIPO Assemblies. The award-winning musician made an impassioned plea for action by the Organization's 184 member states, to improve access to published works for those living with visual impairment. Estimates suggest that only five percent of all published works are available in formats accessible to the estimated 314 million people around the world that live with such disabilities.



Photos: WIPO/E. Berrod

Stevie Wonder is a prolific singer-songwriter with 49 top-40 hits, 32 number-1 singles and over 100 million unit sales.

In an interview available on WIPO's YouTube Channel, the artist spoke about his inspiration: "life itself is what drives me," he said, "there's always something new out there." On the importance of copyright to musicians, he said, "I don't want to imagine a world without copyright protection... this is our livelihood." Asked if he could imagine a world without music, he responded, "I can't, I won't and I hope there never is."

In his capacity as United Nations Messenger for Peace, the singer-songwriter, who lost his sight at an early age, launched a "declaration of freedom for people with disabilities." He said he was inspired by a desire to bring "hope and light to the millions around the world who live with disabilities" and specifically the blind or visually impaired. "It's... a plan that will empower the independ-

ence of people with disabilities by providing them with the tools to learn and grow," he said.

"Through your legislative efforts," he told delegates, "incentives can be created to advance the blind and visually disabled toward the promise of a better life." He underscored that access to "books on science, medicine, history and philosophy" would help young people with disabilities "to be fully educated and to one day live out their dream to be a prime minister, doctor, writer or teacher."

He called on the international community to take urgent action "to declare a state of emergency, and end the information deprivation that continues to keep the visually impaired in the dark," adding "the untapped genius of the 300 plus million who have a visual disability are in need of our love and action; today, not tomorrow, but today."

Recognizing the importance of copyright to authors and musicians, Stevie Wonder urged policymakers to develop solutions that would ease access to copyrighted materials for people with print disabilities. "While I know that it is critical not to act to the detriment of the authors who labor to create the great works that enlighten and nourish our minds, hearts and souls, we must develop a protocol that allows the easy import and export of copyright materials so that people with print disabilities can join the mainstream of the literate world," he said. "There are many proposals on the table that will create a safe clearinghouse for the exchange and translation of books; please work towards a consensus."

"Unlock the blinders that block accessibility of translating books into readable formats for people with print disabilities," the singer urged; "our work is not done." He encouraged policymakers "to put ideological differences aside and come up with a practical solution," to give print-disabled persons the "tools to think their way out of poverty and the darkness that is created when the mind does not have access to something as simple, but as powerful, as a book."

Stevie Wonder teased member states, saying "please work it out or I'll have to write a song about what you didn't do." On a more serious

The TIGAR initiative

A groundbreaking public-private initiative that promises to improve access by the world's 314 million visually impaired persons (VIPs) to published works was launched by WIPO's Stakeholders' Platform¹ at a meeting in New Delhi, India, in October 2010. The trusted intermediary global accessible resources project (TIGAR) will enable publishers to make their titles easily available to trusted intermediaries (TI) who will create and share works in formats accessible to VIPs. TIGAR promises to allow VIPs anywhere in the world to search for content across distributed TI collections and to download a selected title onto a local device in the format of their choice.

TIGAR is a three-year pilot project and the result of close collaboration between WIPO and organizations representing authors, publishers, the VIP community and institutions that serve persons with print disabilities. These include the World Blind Union (WBU), the International Publishers Association (IPA), the International Federation of Reproduction Rights Organisations (IFRRO), the International Federation of Library Associations and Institutions (IFLA) and the Daisy Consortium.

note, he said, "it is our legacy and our gift to the future. Let's do this."



The charismatic singer then took to his keyboard and drove his message home by playing excerpts from some of his most well-known hits, such as "My Chérie Amour" and "I Just Called to Say I Love You." "People know the songs," he explained, "because they have been able to hear them and to get them; there are people who... probably have far more to offer than myself who are locked in a kind of prison because information is not available to them."

After his speech, the artist spoke of his own experiences in starting out as a blind musician, noting, "musically, that wasn't so difficult, I really started music by ear... My mother did have a radio, and I was able to listen and hear music and wonder how all those people fit inside a radio." He also spoke of how he was able to benefit from the "af-

firmative steps" that had been taken in the United States "to ensure equal access to a quality education for all Americans."

He explained that he was committed to "unlocking... awareness" and that, "just because you are a blind person, it doesn't mean you can't learn." He noted that many people with disabilities have "great things to offer as well, so we cannot allow the information highway to block... or stop anyone's opportunity."

Reflecting on the new opportunities technologies offer to those living with disabilities in overcoming the challenges of daily life, he said, "it's a very exciting time." Web and smart phone applications for the blind, such as iPhone's voice-over reader, are making a real difference to the quality of life for those living with disabilities. "When things are... made accessible it gives us all a sense of independence and freedom... but the systems have to be put into place as I know they can be," he observed.

The singer is currently working with the American Society of Composers, Authors and Publishers (ASCAP) to make the lyrics to his songs available in Braille, with a view to making them "accessible to everyone." "The bottom line," he said, is, "let's find a way for this to happen – it can't be that difficult."

If policymakers make headway on this issue and a solution is found within the next 12 months, the world-famous singer promised to return in full voice next year and to perform live in concert.

WIPO's member states are currently discussing proposals to create an enabling legal environment for better access to copyright-protected works for reading impaired persons within the Standing Committee on Copyright and Related Rights (SCCR).

¹ Made up of parties representing the interests of right holders and VIPs to explore concrete needs, concerns and approaches to facilitate access to works in alternative formats for people with disabilities.

MOROCCO DISPLAYS ITS CULTURAL WEALTH



Photos: WIPO/C. Jewell



The depth, diversity and distinctiveness of the culture of the Kingdom of Morocco was showcased in one of two exhibitions on the sidelines of this year's meetings of WIPO Assemblies. *WIPO Magazine* brings a taste of what was on offer to its readers.

A feast for the senses

The exhibition sponsored by the Government of Morocco offered a sumptuous glimpse of the country's unique heritage, rich cultural diversity and extensive biological resources.

“A country at the heart of history, a country where art is culture, a country strengthened by its cultural diversity, a country of exceptional genetic resources, a country with an eye to the future, a land of hospitality”

Anis Birrou, Secretary of State in Charge of Handicrafts

At the crossroads between sub-Saharan Africa, Europe and the Middle East, the Kingdom of Morocco is “a place where civilizations meet and cultures converge.” Its unique geographical location and historical heritage have influenced and shaped the country's distinctive personality, enabling the development of an amazing wealth of art forms. These range from architecture, calligraphy and metalwork, to pottery, leather and woodwork, weaving and jewelry-making – each com-

binning tradition with modernity. Crafts and products from ceramics to kaftans and saffron to tagines were on display.

The exhibition offered a flavor of the dynamism and vitality of Moroccan culture, reflecting age-old traditions and modern creative trends. Morocco has taken a number of measures to highlight the “excellence and authenticity” of its products and to protect and preserve its “tangible and intangible national heritage.” Its agricultural policy, for example, known as the “Green Morocco Plan,” places special emphasis on the development of local products to promote sustainable and viable local development and foster a “truly modern” sector that offers “a wide range of quality products with high added value” for local and international markets.

At a reception on the first day of the WIPO Assemblies meetings, Morocco's Ambassador to the United Nations in Geneva, His Excellency Omar Hilale, underlined that protecting the country's heritage was one of his Government's priorities. He stressed that such effective legal protection was an essential safeguard against illegal reproduction and would enable the crafts sector to continue to flourish.

WIPO Director General Francis Gurry said that the rich and varied display of Moroccan culture offered “a prism” through which to “experience the distinctive creative heritage that is so integral to Morocco's global identity.” He applauded the Moroccan Government's commitment to promoting and preserving the country's cultural wealth, which currently employs some 20 percent of the national la-

bor force and accounts for over 10 percent of its gross domestic product (GDP).

At the start of the reception, guests were welcomed by a troupe of Allaoui performers which, to the accompaniment of drums and horns, performed a striking victory dance.



Later in the evening, guests were treated to a stunning fashion show featuring the colorful gowns of Moroccan designer Samira Hadouchi, whose work combines tradition with modernity, sophistication and elegance.



Ms. Hadouchi, who has designed for stars, including Whitney Houston, said the creativity in her work enabled her to reach new heights of expression and design. "Morocco is a country in which you can find a wide range of cultural influences and, through my work, I am able to express our unique cultural iden-

tity and to give it value," she said. "Protecting the creativity of artists and designers like myself is key, and intellectual property is a really important means of doing this."

The colorful and distinctive works of artist and master calligrapher Mohammed Amzil were also on display. Speaking about the significance of the ancient art of calligraphy to his own art, he said, "calligraphy is my oxygen... it's a big sea of secrets... you find balance, movement, everything, because it is very supple." Mr. Amzil underlined the importance of respecting the rights of creators: "to ensure the future of creativity." "To copy a work is unpardonable," he said. "When you love art, you have to love the artist, and to love him you have to think of his interests also."

Throughout the evening, guests savored the rhythmic beat of the music of the Gnawa people for whom music holds a religious significance, enabling them to attain a trance-like state. These musical performances were but a taste of the rich musical traditions of the country where group dances are as numerous as its tribes and are associated with popular poetry.



The exhibition also featured Morocco's rich genetic diversity – saffron, henna, argan oil, olive oil, figs, date palm, honey, roses and spices – variously used for medicinal, cosmetic and culinary purposes. These resources play a key role in fostering sustainable rural development.

The exhibition showed how Morocco's cultural sector is constantly exploring new means of expression as new branches of creativity spring from the country's traditional cultural roots. Contemporary designers, creators and craft workers are developing new designs and working with new materials and color combinations to renew and modernize their creations and to keep pace with evolving consumer tastes while preserving the authenticity that makes their works uniquely Moroccan.

A TREASURE-TROVE OF OMANI CRAFTS

A fascinating exhibition, offered jointly by the Public Authority for Craft Industries (PACI) of the Sultanate of Oman and WIPO, was one of two organized on the sidelines of WIPO's annual meetings. It also marked the 40th anniversary of the country's National Day.

One of the world's hottest and most arid regions, Oman is endowed with spectacular landscapes as well as a rich and unique cultural heritage. Its handicrafts originally emerged as skills of survival in harsh desert conditions. Today, under the leadership of His Majesty Sultan Qaboos bin Said, "a far-sighted policy of regulated development... aims to protect and nurture Omani traditions, including the heritage crafts which have sustained Omani society for millennia."

Referring to the unique character of Omani heritage, Mrs. Aiysha bint Khalfan Al-Siyabiya, PACI chairperson said, "For centuries, Omanis have applied their creativity to developing craft-making skills that made good use of their natural resources."

PACI, established by Royal Decree in March 2003, aims to promote Oman's crafts sector and ensure traditional skills survive and provide employment for new generations of artisans. It trains and supports craft workers and helps in identifying new markets for their wares. It also registers, documents and conserves the crafts of different regions and identifies the needs of artisans.

In the exhibition brochure, WIPO Director General Francis Gurry, pointed to the "multitude of craft industries developed over generations through the ingenuity and creativity of the Omani people" and applauded the Government of Oman's commitment to ensuring this sector continues to develop and flourish.

"The classic beauty of Oman's earthenware has a timeless geometric grace of form which has made it a favorite amongst interior designers."

This colorful and insightful exhibition showcased a range of traditional handicrafts, including precious metalwork, fine textiles, palm weaving and pottery. Delegates were offered an opportunity to see craft-

workers practice their skills firsthand. Oman's traditional crafts sector is thriving in spite of globalization and modern manufacturing techniques.

Pottery and ceramics



Photos: Courtesy of Omani Crafts

Pottery is one of Oman's most commercial traditional industries. Omani potters are renowned for the beautiful designs of their hand-thrown pots.

Basket making



Basket-making is still widely practiced. Natural fibers such as date palm and ghadaf, a desert plant, are woven, plied, coiled, plaited, stitched and twined to make a variety of products. No part of the plant is wasted although techniques vary from region to region.

Silverware

"In Omani tradition, silver symbolizes purity and is believed to have talismanic value, bringing good fortune and protection from evil."

The Sultanate is renowned for its traditional silverware, and its silversmiths are famed for their high-

Frankincense

"Shrouded in the mists of legend... the precious beads of crystallized sap were once worth their weight in gold."

Frankincense, a prized fragrance among Omanis, is at the heart of a flourishing cottage industry. A centerpiece of Omani culture, it is used to demonstrate hospitality towards guests. This mystic fragrance is drawn from the Boswellia tree which fringes the arid Nejd desert and the dry lower reaches of the Dhofar region. Incisions made in the trunks of the trees release a pearly white liquid which hardens into semi-opaque beads. It has a number of therapeutic properties and is widely used in perfumery and cosmetics.



quality work, particularly in producing the khanjar, an ornate dagger which remains a feature of male attire on formal occasions.

The khanjar is a hallmark of Omani heritage, identity, manhood and pride. The skill and precision required to create these ornate designs are a testimony to the fine craftsmanship of Omani silversmiths. The khanjar is worn on an ornate leather belt decorated with silver wire.

Omani silver jewelry – spiked bracelets, rings adorned with precious stones (al khatim), the mafraq (a type of headdress), earrings, pendants, brooches, etc. – is a feature of female Omani attire and also plays a role in traditional dance routines.

Carpentry and woodwork



A nation with a rich maritime history, Oman has a strong shipbuilding tradition. The exhibition fea-

tured models of fishing and trading vessels some of which are still in use today. Omani shipbuilding can be traced back 4,500 years.

Mandoos

These ornate chests, which vary in size and are highly collectible, are traditionally made from rosewood, walnut or other special woods and inlaid with brass, gold or silver and precious stones.

The jertz (axe)



Dating from the Bronze Age, the jertz is a distinctive symbol of the Musandam region. Made from intricately carved indigenous wood, it features a small axe-shaped head of engraved steel inlaid with brass.

Flower distillation



The famed rose gardens of Jabel al Akhdar are the source of traditional rosewater production. Rosewater is often sprinkled on guests as a mark of respect. It is widely used to flavor tea, coffee and a range of culinary dishes, including Omani halwa, a hallmark of Omani hospitality.

A NEW DAWN FOR CUSTODIANS OF TK IN AFRICA

¹ Botswana, Gambia, Ghana, Kenya, Lesotho, Liberia, Malawi, Mozambique, Namibia, Sierra Leone, Somalia, Sudan, Swaziland, Uganda, United Republic of Tanzania, Zambia, Zimbabwe.

In early August, the African Regional Intellectual Property Organization (ARIPO) and its 17 member states¹ took an historic step in adopting a legal framework, known as the “Swakopmund Protocol for the protection of traditional knowledge and expressions of culture.” This landmark event – which took place at a Diplomatic Conference in the coastal town of Swakopmund, Namibia – was the result of 10 years of intensive consultations. It was heralded by WIPO Director General Francis Gurry as “a significant milestone in the evolution of intellectual property.” In this article, **Emmanuel Sackey**, ARIPO’s Program Manager for the Protection of Genetic Resources, Traditional Knowledge and Expressions of Folklore, explains how this new legal framework came into being and what it means for custodians of traditional knowledge (TK) in Africa.

Growing interest in TK

In recent years, the biotechnology, pharmaceutical and health care industries have become increasingly interested in natural products as sources of new biochemical compounds for drug, chemical and agro-product development. This has fuelled a resurgence of interest in TK and its associated genetic resources (GRs) as means of advancing the frontiers of science and technology and of gaining useful insights into the functioning of ecological systems.

This knowledge has helped increase economic productivity and is making a significant contribution to industrial research and development (R&D) programs. Traditional knowledge is a factor in the commercialization of natural products, but custodians of this knowledge are often not widely recognized or rewarded for its use. Commercial interests generally use these resources free of charge, accessing them through databases, academic publications or field collections. Concerns over who owns this knowledge and who has the right to its use, as well as its growing economic significance, have generated a wide range of public policy debates including in relation to intellectual property (IP) protection.

Parallel processes

While the international community debates international standards for the protection of GRs, TK and traditional cultural expressions/expressions of folklore (TCEs), a number of parallel initiatives have been unfolding at regional and national levels. These efforts seek to identify approaches and best practices for tackling the many complex questions associated with mainstreaming these issues into conventional IP policies and systems.

The Swakopmund Protocol

The Swakopmund Protocol, adopted in August 2010, is underpinned by the principle that the knowledge, technologies, biological resources and cultural heritage of traditional and local communities are the result of tested practices of past generations. These resources are held in trust by today’s custodians for future generations.

The Swakopmund Protocol was signed by nine ARIPO member states, namely, Botswana, Ghana, Kenya, Lesotho, Liberia, Mozambique, Namibia, Zambia and Zimbabwe. It will enter into force once six member states have deposited instruments of ratification (for signatories) or accession (for non-signatories). Any state that is a member of the African Union or the United Nations Economic Commission for Africa may also sign up to the Protocol.

It affirms the principle that traditional or local communities are the custodians of their TK, its associated GRs and TCEs, and empowers them to exercise rights over their knowledge and resources.

“This historic development provides the necessary tools to prevent the ongoing misappropriation of traditional knowledge and traditional cultural expressions in Africa. The custodians of this knowledge are now empowered to exercise rights over it” said ARIPO Director General Gift Sibanda. “By creating a framework for indigenous communities to

get a return on the use of their knowledge, we have created opportunities for economic development and wealth creation," he added.

The Protocol recognizes the need to respect, recognize and protect Africa's abundant multi-ethnic character, as well as its rich cultural heritage and TK. It further articulates and amplifies the shared position of African countries relating to collective or community rights and the sharing of benefits accruing from the commercial exploitation of their biological resources, TK and TCEs.

This new regional legal framework is designed to accommodate the characteristically holistic world view of African TK holders, and to provide legal certainty in the exercise and management of their inalienable rights. As such, it empowers them to use their knowledge for sociocultural development. It also makes provision for the registration of multi-cultural and trans-boundary TK and TCEs to resolve uncertainties relating to ownership of this knowledge which may be held by more than one community within the same or neighboring countries.

A decade in the making

Africa is endowed with a wide and varied range of biological resources and a deep-rooted knowledge of their management and use. This not only reflects the cumulative body of knowledge and beliefs handed down through the generations but also the intimate relationship of local people to their environment. The huge inherent value of these resources has led African countries to explore mechanisms that would provide them with a basis for socioeconomic development.

ARIPO's focus on the protection of indigenous knowledge began in earnest in August 2000 following a decision by the Organization's Council of Ministers to develop a "coordinated strategy," to "take initiatives on traditional knowledge" and to engage fully in WIPO's activities in this field.

Two years later, at a meeting in Mangochi, Malawi, the ARIPO Council of Ministers agreed to add GRs and folklore to the Organization's work on TK, in line with international discussions. The Council then commissioned a study on the feasibility of establishing, in cooperation with member states, an inventory or databases of TK, drawing lessons



Photo: iStockphoto/Jennifer Kahn

from countries that had already developed such tools. This paved the way for the development of a regional legal framework for the protection of TK and TCEs. In 2006, ARIPO's Administrative Council, at a meeting in Maputo, Mozambique, adopted the final version of the legal text elaborated with WIPO's assistance. This was endorsed by ARIPO's Council of Ministers in Lesotho in 2007, which called on ARIPO to formulate it as a draft Protocol with implementing regulations.

An inclusive process

Extensive consultations with a wide range of stakeholders have been a hallmark of the development of the Swakopmund Protocol. Thanks to the inclusive nature of the process, ARIPO's 17 member states have gained a solid understanding of the underlying cross-cutting issues.

A similar initiative, developed by ARIPO's sister organization, the *Organisation africaine de la propriété intellectuelle* (OAPI), was adopted in 2007. Based in Yaoundé, Cameroon, OAPI has 16 member states² and deals with IP matters in the mainly French-speaking countries of Central and West Africa.

The adoption of these two important initiatives reflects a commitment by the majority of sub-Saharan African countries to protect the rights of traditional and local communities in their knowledge, innovations and practices. Not only has it repositioned ARIPO and OAPI as leading forces in the development of IP in Africa, it has also enabled African countries to play a leading role in global

² Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Congo, Côte d'Ivoire, Equatorial Guinea, Gabon, Guinea, Guinea-Bissau, Mali, Mauritania, Niger, Senegal, Togo



norm-setting processes relating to the protection of TK and folklore.

3 A legal instrument tailored or designed to address a specific IP issue

4 FAO – The Food and Agricultural Organization of the United Nations; WHO – the World Health Organization UNCTAD – The United Nations Conference on Trade and Development; UNESCO – The United Nations Educational, Scientific and Cultural Organization

5 ARIPO acknowledges the significant contributions made by Mr. Wend Wendland, Director of WIPO's Traditional Knowledge Division, Professor J.A. Ekpere, retired Executive Director of the African Union Science and Technology Research Commission, Mr. John Asein, Director, Nigerian Copyright Institute and Mr. Hassan Kaffa, a former senior official of the African Intellectual Property Organization (OAPI).

Contributing to an international legal framework

The need to protect TK and TCEs has engaged the international community for some years. The international adoption of a mandatory *sui generis* system³ would appear to offer the most focused protection for TK. The Swakopmund Protocol is an important input into efforts to identify an effective international framework for the protection of TK and folklore. ARIPO and its member states are actively engaged in this process.

A special focus on genetic resources

The Swakopmund Protocol only covers TK and TCEs. It does not address IP issues arising in relation to access to and sustainable use of GRs. This issue goes beyond IP protection and requires a holistic approach that encompasses environmental concerns, as stipulated in the Convention on Biological Diversity (CBD).

ARIPO is developing a separate regional legal framework for the protection of GRs, which will address issues such as the relationship between the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) of the World Trade Organization (WTO), as it relates to patents, and the obligations of the CBD; the asymmetry between the benefits obtained by companies that exploit GRs and those received by traditional communities; as well as the sustainable use of these resources. Considerable discussions have taken place in different international fora (WIPO, CBD, FAO, WHO, UNC-

TAD, UNESCO and WTO, etc.⁴), and a number of international regulations and policies on the protection of GRs are under discussion.

Benefits of the Protocol

The entry into force of the Protocol will empower custodians and holders of TK and TCEs to use their knowledge for socioeconomic development and wealth creation. It also promises other benefits, including:

- helping to curb biopiracy;
- preventing illicit claims being made in patent applications relating to TK-based inventions;
- enabling the registration of regional TK and TCEs, i.e. those that are trans-boundary and multicultural in nature;
- providing a framework for national legislative developments on the protection of these resources.

ARIPO's member states adopted a resolution at the Diplomatic Conference that reflects a commitment to developing national legislation and a concrete plan of action to ensure TK continues to serve the needs and aspirations of traditional and local communities.

This historic achievement will enable Africa as a whole to add value to the intellectual, cultural and artistic efforts that have their basis in local and traditional communities. Through their collective and concerted efforts and the adoption of the Protocol, ARIPO and its member states have clearly and unequivocally signaled that, together, they are committed to respecting, recognizing and using Africa's intangible assets for the socioeconomic development of the continent.

The full text of the Protocol is available on ARIPO's⁵ website at www.aripo.org.

IGC

Negotiations are currently underway in WIPO's Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) towards the development of an international legal instrument for the effective protection of TK and TCEs, and to address the IP aspects of access to and benefit-sharing of GRs.

In May 2010, the IGC agreed on a new format – intersessional working groups (IWGs) – to support and facilitate the IGC's negotiations by providing legal and technical advice and analysis, including, where appropriate, various options and scenarios. At its first session in July 2010, the IWG focused on TCEs, considered the most mature of the three issues under discussion. The draft text agreed during this meeting will be discussed at the IGC's meeting in December 2010.

AFTER BILSKI

In this article, **Chief Judge Randall R. Rader** of the United States Court of Appeals for the Federal Circuit, explains the implications of the recent *Bilski* decision by the U.S. Supreme Court on the patentability of business methods.

Photo: iStockphoto/Christian Rummel



Introduction

Patent-eligible subject matter, and in particular the eligibility of business methods, has been a prominent international topic since at least *State Street Bank*, the famous last case of the even more famous Circuit Judge Giles Rich. A recent U.S. Supreme Court Case, *Bilski v. Kappos*, squarely addressed this issue. The Court provided guidance that will shape the debate for years to come.

Patentable subject matter: historical background

Section 101 of the Patent Act states that “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may be eligible for patent protection.” The four broad categories in the statute admit almost no limit on eligible subject matter. Indeed, U.S. law contains no categorical exclusion from patent protection.

Although the statute contains no narrowing exclusions, the Supreme Court has articulated three exceptions to the Patent Act’s broad patent-eligibility principles: “laws of nature, physical phenomena, and abstract ideas.” In *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980), the Supreme Court reasoned that laws of nature and natural phenomena fall outside the statutory categories because those subject matters “are the basic tools of scientific and techno-

logical work.” In *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972), abstractness, akin to disclosure problems directly addressed in Section 112 of the U.S. Patent Act, also places subject matter outside the statutory categories. In the context of business methods, the primary inquiry involves ascertaining the abstractness of the claimed process.

Bilski in the Federal Circuit

In an atmosphere of patent reform, however, the Federal Circuit decided to address the patent-eligibility issue *en banc*.¹ The *Bilski* case became the vehicle for that reconsideration. The claimed invention involved a method for managing the consumption risk costs of a commodity sold by a commodity provider at a fixed price – in simple terms, the familiar concept of hedging. The U.S. Patent and Trademark Office (USPTO) examiner rejected the claims under Section 101, finding that the claimed invention was a pure business method without any attachment to a machine. The Board of Patent Appeals and Interferences (the Board) at the USPTO affirmed the examiner’s rejection. Specifically, the Board concluded that the claimed invention was an abstract idea. On appeal, the Federal Circuit, led by then-Chief Judge Michel, affirmed that decision, with Judges Newman, Mayer and myself dissenting.

In its very lengthy opinion, the Federal Circuit abandoned the “useful, concrete and tangible result” test from *State Street Bank*. Instead, the court fashioned a “machine-or-transformation” test based on several decades-old Supreme Court cases. Under this test, a process is patent-eligible if:

- the process is “tied to a particular machine or apparatus”; or
- the process “transforms a particular article into a different state or thing.”

The Federal Circuit did not categorically exclude either business method patents or software patents, explaining that such patents are subject to the same legal requirements as any other process or method.

Unique among the Federal Circuit judges, Judge Newman would have found the *Bilski* patent eligible. In her view, the machine-or-transformation test

¹ *en banc* – where all judges of a court hear the case (an entire “bench”), rather than a panel of them. This often applies in unusually complex cases or those considered to be of unusual significance.



imposed a new and far-reaching restriction on patent eligibility. Judge Mayer agreed with the majority, but would have gone further and banned all business and software patents.

In my dissenting opinion, I found that the *Bilski* patent would be ineligible as an abstract idea. I proposed relying on the plain words of Section 101, rather than manufacturing new tests. I focused on the language of Section 101 and detected no implication that the Act extends patent protection to some subcategories of processes but not others. In my view, the law should not define “abstract” so as to impose artificial limits from the industrial age (machine-or-transformation) on the age of cyberspace and beyond. I also wrote that the new test did not answer the most fundamental question of all: why should some categories of invention deserve no protection?

Bilski in the Supreme Court

The Supreme Court, in its *Bilski* opinion issued on June 28, 2010, unanimously affirmed the rejection of *Bilski*'s claims, but also refocused the question on the language of the statute and the meaning of abstractness. The decision featured a majority opinion authored by Justice Kennedy, a plurality also authored by Justice Kennedy, and two concurrences.

Majority opinion of the Court

Justice Kennedy authored the opinion of the Court, joined by Chief Justice Roberts and Justices Thomas, Alito and Scalia. The Court opined that the machine-or-transformation test was not part of the statute but that, nonetheless, this formulation might serve as a clue in determining eligibility under Section 101. However, the machine-or-transformation test is not the sole test for determining whether an invention is a patent-eligible process. The Court then rejected the *State Street Bank* test, but expressly left open the possibility that other limiting criteria might serve to enlighten the meaning of abstractness consistent with the statute. The Court found no categorical prohibition against business method patents, as the statute itself does not differentiate between business methods and other processes. The Court also observed that the

patent-eligibility inquiry is only a threshold test (see *Bilski v. Kappos*, 130 S. Ct. 3218, 3225 (2010)). The statutory provision itself that approves the broad categories of subject matter, Section 101, directs primary attention to “the conditions and requirements of [title],” (see 35 U.S.C. Section 101).

Justice Kennedy's plurality

Justice Kennedy's plurality opinion, joined by the same justices as the majority other than Justice Scalia, notes that patent eligibility must have flexibility to evolve beyond the decisions reached for past technology, in order to encompass new and unforeseen inventions.

The concurring opinions

Justice Stevens authored a concurrence joined by Justices Ginsburg, Breyer and Sotomayor. He wrote at great length to explain that the term “process” in the Patent Act, when construed against its historical background, should exclude business methods.

Justice Breyer also authored a concurrence, joined in part by Justice Scalia, emphasizing that:

- Section 101 is broad but not without limit;
- the machine-or-transformation test may be useful in determining eligibility;
- the machine-or-transformation test is not the sole test; and
- the “useful, concrete and tangible result” test is overbroad.

Conclusion

The Supreme Court *Bilski* case emphasized that abstract ideas are not patentable and held that the machine-or-transformation test is not the sole test for patent eligibility. In ascertaining abstractness, the Federal Circuit remains free to develop additional criteria for patent eligibility, but those criteria must adhere closely to the statute and Supreme Court precedent. Any application of the notion of abstractness will not, however, categorically exclude all business methods and software patents, which remain potentially eligible for U.S. patent protection.

CHINA'S IP JOURNEY

In the 30 years since China joined the World Intellectual Property Organization (WIPO), the country's progress in the field of intellectual property (IP) has been remarkable. Today, China has one of the top five patent offices in the world and hosts the world's largest trademark office. It has made historic advances in the development of its copyright system and is home to a vibrant creative sector. The world's second largest economy clearly embraces IP in its drive to become an innovation-based economy. To mark this anniversary, *WIPO Magazine* invited three leading Chinese (figures in IP) to offer their perspectives on China's IP journey. **Commissioner Tian Lipu** of the State Intellectual Property Office of China (SIPO) talks about the evolution of the Chinese patent landscape; Mr. **Zhou Bohua**, Minister of the State Administration for Industry and Commerce (SAIC) outlines China's achievements in the area of trademark protection; and **Minister Liu Binjie**, Director of the National Copyright Administration of the People's Republic of China (NCAC) describes China's commitment to the protection of copyright.

China and IP

Commissioner Tian Lipu, SIPO

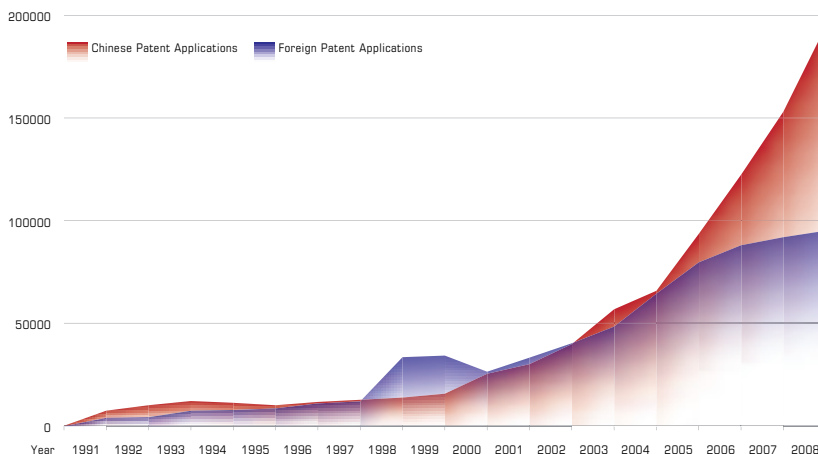


Prior to 1980, the year in which China joined WIPO, the concept of IP was almost unknown in China, and the value of intellectual assets had yet to be recognized. However, thanks to the determination and unremitting efforts of the Chinese people, a sound IP system – compatible with China's development needs and consistent with international rules – has been established and at an unprecedented pace. In the past 30 years, China has:

- set up a comprehensive IP legal framework and operational system;
- implemented an effective mechanism for the administrative and judicial protection of IP;
- acceded to 13 WIPO-administered international IP treaties;

- comprehensively carried out its obligations under international treaties and agreements; and
- provided effective IP protection to right holders at home and abroad.

Patent applications filed with SIPO



The international community, including WIPO and other international organizations and various countries, has given us energetic support in promoting the development and improvement of China's IP system. This has enabled us to train our IP professionals and to more widely disseminate IP information to promote greater public awareness and knowledge of IP in China.

Along with continuous improvements to the country's IP legal framework, China has witnessed rapid growth in the use of the IP system, experiencing dramatic increases in the number of applications for IP rights. Patents, trademarks and copyright play an increasingly prominent role in national economic development, and IP awareness throughout Chinese society has risen considerably.

In 2008, the government launched China's national IP strategy, marking a turning point in its engagement with IP and clearly indicating China's steadfast determination to encourage innovation and create a knowledge-based economy.

China's patent system

Since its establishment in 1985, China's patent system has matured considerably, breaking new records and significantly improving the country's innovative capacity. In the first decade of the 21st century, patent applications in China grew by an average annual rate of 22.3 percent. From January



to October 2010 alone, the number of applications for invention patents totaled 295,275, up 25 percent over the same period in 2009. Of these, almost three quarters of the total (72.5 percent – 214,079 applications) were filed by domestic applicants.

In 2009, China became the fifth largest user of the Patent Cooperation Treaty (PCT), filing just under 8,000 international patent applications which represents a growth rate of 29.7 percent. We anticipate that total PCT filings in 2010 will surpass the 10,000 mark. Chinese companies and inventors increasingly recognize the PCT as an important channel for filing patent applications abroad. This further contributes to China's IP endeavors and helps to promote scientific and technological innovation in the country.

Global innovators and companies also use China's patent system extensively. By September 2010, SIPO had received a cumulative total of 1 million patent filings from overseas applicants. Half of these were filed in the past five years, making China one of the most active countries in terms of global patenting activity.

With three major revisions – in 1992, 2000 and 2008 – China's patent law has become increasingly comprehensive. By raising standards for granting patents, optimizing examination and approval procedures, strengthening patent protection and better balancing the interests and benefits of patent right holders with the interest of the general public, China's patent system has achieved the legislative goal of stimulating and protecting innovation. These legal reforms promote market order by guiding and regulating the behavior of major market players. They have also comprehensively improved capacity to use the patent system, and enhanced the country's core competitiveness. The reforms have also enabled us to adapt to and vigorously observe international economic and trade rules.

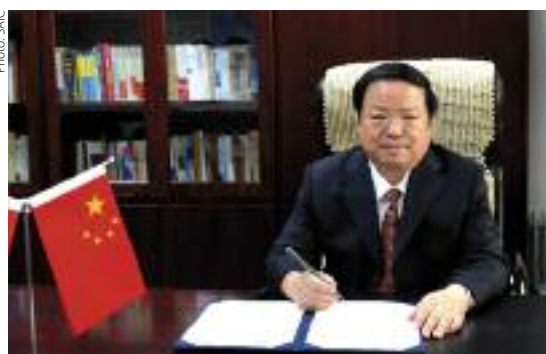
Over the past 30 years, China has acceded to a range of international conventions and bilateral agreements in the field of patents. We conscientiously respect our international obligations, and actively participate in international discussions on major issues such as the harmonization of the international patent system and IP protection of genetic resources, traditional knowledge and folklore. On the basis of mutual respect and equality, China has strengthened its dialogue and exchanges with various countries and international organizations, and has sought to cooperate with

them by all means. In this way, China continues to make a positive and practical contribution to the development of the international patent system.

Today, the goal of sustainable economic development presents China with a number of major challenges. These relate to an imbalance in our industrial structure and a less than optimal mode of development. We still have a long way to go before China becomes an innovation-oriented nation. Like other nations, China has to tackle global challenges such as climate change, public health and the energy crisis. Each of these challenges has a bearing on the patent system. They underline the need to continue to stimulate innovation in the search for effective and durable solutions. Against this backdrop, if we are to succeed in securing the future development of China's patent undertakings, the country has no choice but to effectively and vigorously stimulate innovation throughout Chinese society. This will involve encouraging companies to make better use of the PCT system, accelerating economic development and enhancing core national competitiveness. China will join hands with the rest of the world, within the framework of WIPO, to address these challenges and to make its due contribution to improving the international patent system and promoting the common prosperity and development of all countries.

China's trademark strategy

Mr. Zhou Bohua, Minister of the State Administration for Industry and Commerce (SAIC)



Competition in the modern economy has IP at its core. Trademarks have the most direct link to, and the greatest impact on, the interests of producers, business operators and consumers. As such, they play an increasingly important role in modern socio-economic development. Strengthening trademark registration and application procedures, and enhancing protection mechanisms and management systems is of vital strategic importance

if China is to facilitate and maximize business development, sharpen its competitiveness and become an innovation-oriented economy.

Since the Chinese reform and opening-up process began in 1978, the country's efforts in the trademark field have proven indispensable to the nation's rapid economic progress. Mutually supportive and parallel administrative and judicial protection systems that are distinctively Chinese have taken shape. The legal system, which conforms to international rules and reflects China's current realities, places a high priority on trademark issues. Following the launch of the national IP strategy, the SAIC, the authority responsible for trademark registration and management in China, has worked tirelessly to implement effective trademark strategies. Some remarkable achievements have resulted from these efforts.

First, the SAIC has reduced the backlog in unprocessed trademark applications resulting from the growing demand for trademark rights. It now takes less than a year to complete the trademark registration process in China.

Second, greater emphasis has been placed on protecting the exclusive right to use a registered trademark. This has created fertile ground for economic development.

Third, very solid work has been done on trademarks in relation to agricultural products and the use of geographical indications. This has helped to maximize the potential to increase farmers' income, improve agricultural productivity and facilitate rural development.

Fourth, positive consideration has been given to using registered trademark rights as assets to secure finance for business, taking the use and management of trademark rights to a higher level.

Finally, trademark matters generally have received heightened attention with renewed efforts to broadly disseminate trademark information and improve the services available to the public. The 2.36 billion hits recorded on China's trademark website last year demonstrate the country's success in raising public awareness about trademarks.

China hosts the world's largest trademark office, reflecting the size, importance and appeal of the Chinese market. To date, the number of trademark applications in China stands at 7.992 million. Of the

5.285 million trademarks registered, 4.247 million are still active, both measures ranking first in the world. The number of applications designating China under the Protocol Relating to the Madrid Agreement Concerning the International Registration of Marks now exceeds 150,000, ranking China first in the world for six consecutive years. In terms of applications submitted by Chinese applicants



Photo: iStockphoto/Blyta

under the Madrid System, 10,876 international applications have been submitted, ranking China eighth in the world for six consecutive years and first among developing countries.

In spite of the very significant negative impact of the recent international financial crisis, China has seen a sharp increase in the number of applications for trademark registration. This can be attributed to:

- the Chinese government's positive and proactive approach to the trademark system;
- intensified reform and opening up;
- all-encompassing implementation of trademark strategies;
- increased public awareness of trademark issues;
- more efficient trademark examination; and
- stronger confidence in the system on the part of trademark applicants.

By the end of September 2010, the number of trademark applications in China stood at 781,000 – a year-on-year increase of 26.1 percent. If this trend continues, the number of applications submitted for the whole year is expected to exceed 1 million, setting a new record high. The number of applications accepted for territorial extension or designating China under the Madrid System has reached 10,991, and a further 1,233 applications have been submitted and remain to be processed. This represents a year-on-year increase of 36.5 percent.



While the large number of registered trademarks is evidence of the remarkable success of China's efforts in the trademark arena, few Chinese brands are widely recognized internationally by consumers. This therefore does not reflect the country's economic output and volume of foreign trade and indicates that, while China is a big trademark player, it is not a particularly competitive one. So it is incumbent on us to intensify our efforts to:

- continue the in-depth implementation of the trademark strategy, expanding our capacity for trademark registration and application;
- further improve trademark protection mechanisms and management systems;
- and enhance exchanges and cooperation with our counterparts, including WIPO and trademark authorities in other countries.

This will enable China to become a significant trademark power within a short timeframe.

China's evolving copyright landscape

Minister Liu Binjie, Director of the National Copyright Administration of the People's Republic of China (NCAC)

Photo: NCAC



In June 1980, the Chinese government rode the wave of reform and became a member of the international IP family. China has maintained a close and friendly partnership with WIPO ever since. In the past 30 years, China has actively participated in WIPO-led efforts

to promote the development of the international copyright system, and has played a unique role in this area as a responsible developing nation. At the same time, WIPO has actively supported China's copyright protection work, especially in training copyright professionals to further improve our national copyright protection system.

The last three decades of WIPO membership mark a period of continuous progress for China's copyright protection system, which has grown from practically nothing. In that time, China has set up a fully-fledged legal system for copyright that suits both national conditions and conforms to international copyright rules. China now has a legal system in place to remedy copyright-related disputes. Under this system, judicial protection and administrative law enforcement work in tandem. A basic framework for public services to support the inter-

ests of right holders and users and to encourage broad social engagement to promote respect for copyright is taking shape, as is a market for copyrighted products. This has not only ensured the healthy growth of copyright industries and increased public awareness of copyright, but has also contributed to enhanced and more in-depth international exchanges and cooperation in this field.

Copyright protection in China has made historical advances. Such achievements are a testament not only to the hard work and expertise of China's copyright experts, but also to the selfless dedication of the international community and of WIPO in particular. On this 30th anniversary of China's accession to WIPO, we would like to pay our highest tribute to WIPO, as well as to our domestic and foreign peers in the copyright community, for their great contributions to China's progress in the area of copyright.

Today, China enjoys coordinated political, economic, cultural and social development and its economy, in particular, shows a trend of sustained, strong growth. Yet, even with this impressive development, China still faces resource scarcity, environmental pollution, an irrational economic structure and unprogrammed development. Left unaddressed, these problems will severely hinder China's economic growth. In the new landscape in which we find ourselves in the 21st century, the Chinese government is implementing a strategic plan to "uphold a scientific outlook on development, and build an innovative country." IP protection is at the heart of China's endeavor to achieve these goals. The IP system, including copyright, is being brought into full play to enhance innovation in China, transform modes of economic development and increase core national competitiveness.

We anticipate that China's copyright system will continue to improve, and that even greater emphasis will be placed on protection. China will continue to open up and engage in extensive international cooperation in this area. The Chinese government will strengthen and maintain its successful cooperation and exchanges with WIPO, actively participate in international copyright work and play an active role in establishing new international copyright rules. In this way, China will continue to promote the copyright protection system and its benefits, for the coordinated development of the world economy, culture and science, and for the advancement of civilization and the progress of humankind.

IN THE NEWS

Last GDR patent expires

The last patent granted by the Office for Inventions and Patents of the former German Democratic Republic (GDR) expired at the end of October 2010, according to a report in *The Local: Germany's News in English*. Patent number DD 298536 for a rotary screw cooling compressor was granted on October 2, 1990 – just one day before reunification – to

Dieter Mosemann, a prominent engineer and inventor. Mr. Mosemann, Development Director at the state-owned company VEB Kühlautomat, and his team created cooling systems still used around the world for a wide range of appliances, including supermarket freezers, airplane climate control and applications for cooling indoor ski slopes. ■

Centenary of Dutch patent law

Dutch patent authorities are celebrating the 100th anniversary of the enactment of the 1910 Patent Law (Rijksoctrooiwet). In *A Century of Patents in the Netherlands*, a jubilee volume published for the occasion, authors from the Dutch patent community offer a vision of the past, present and future of patent law. A special series of stamps featuring 10 unique Dutch inventions has also been issued, and an interactive touring exhibition of Dutch inventions, the Patent Parade, is on a one-year journey around the Netherlands. The country's first Patent Act was enacted in 1817 and subsequently abolished in 1869 when the Netherlands "acquired the image of a free-spirited nation." ■

Self-repairing solar cells

Millions of solar cells are used in devices, such as solar panels, for harnessing the sun's energy – but when sunlight mixes with the oxygen in the earth's atmosphere, it can have a destructive effect on solar cells, limiting their long-term effectiveness. Professor Michael Strano, a chemical engineer at the Massachusetts Institute of Technology, and his team of researchers have been seeking ways to minimize solar cell deterioration.

They found that minute solar cells can repair themselves using proteins from

the inner workings of plants. Professor Strano and his team demonstrated that tapping into the photosynthetic reaction center of plants could lead to solar cells with much longer lives thanks to this self-regenerating mechanism. The experiment employed lipids and carbon nanotubes, known for their electrical properties, as well as a surfactant, a molecule that breaks other molecules apart and keeps them separate. Once all parts had been combined, the surfactant was removed, with the result that the other ingredients assembled themselves into

an array of working solar cells – only a few nanometers wide. The cells draw on this self-assembly process in order to repair themselves.

Published in *Nature Chemistry*, the research shows that, while more remains to be done to refine the efficiency of regenerated solar cells, this could lead to a breakthrough in improving solar cell production, and thus to enhanced, sustainable environmental benefits. ■

Hollywood and Bollywood sign historic agreement

Representatives of the world's two most prominent film industries, Hollywood and Bollywood, signed an historic cooperation agreement at Paramount Picture Studios in Hollywood in early November 2010. Under its terms, the city of Los Angeles and the Indian film industry agree to "develop and strengthen motion picture production, distribution, technology, content protection and commercial cooperation between the two

filmmaking communities," according to a press release issued by the Motion Picture Association of America on November 2010. The two parties also support the establishment of the Los Angeles-India Film Council to boost Indian film production in Los Angeles. In March, the two industries launched in Mumbai, India, the Alliance Against Copyright Theft, an Indian-based coalition to protect content. ■

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