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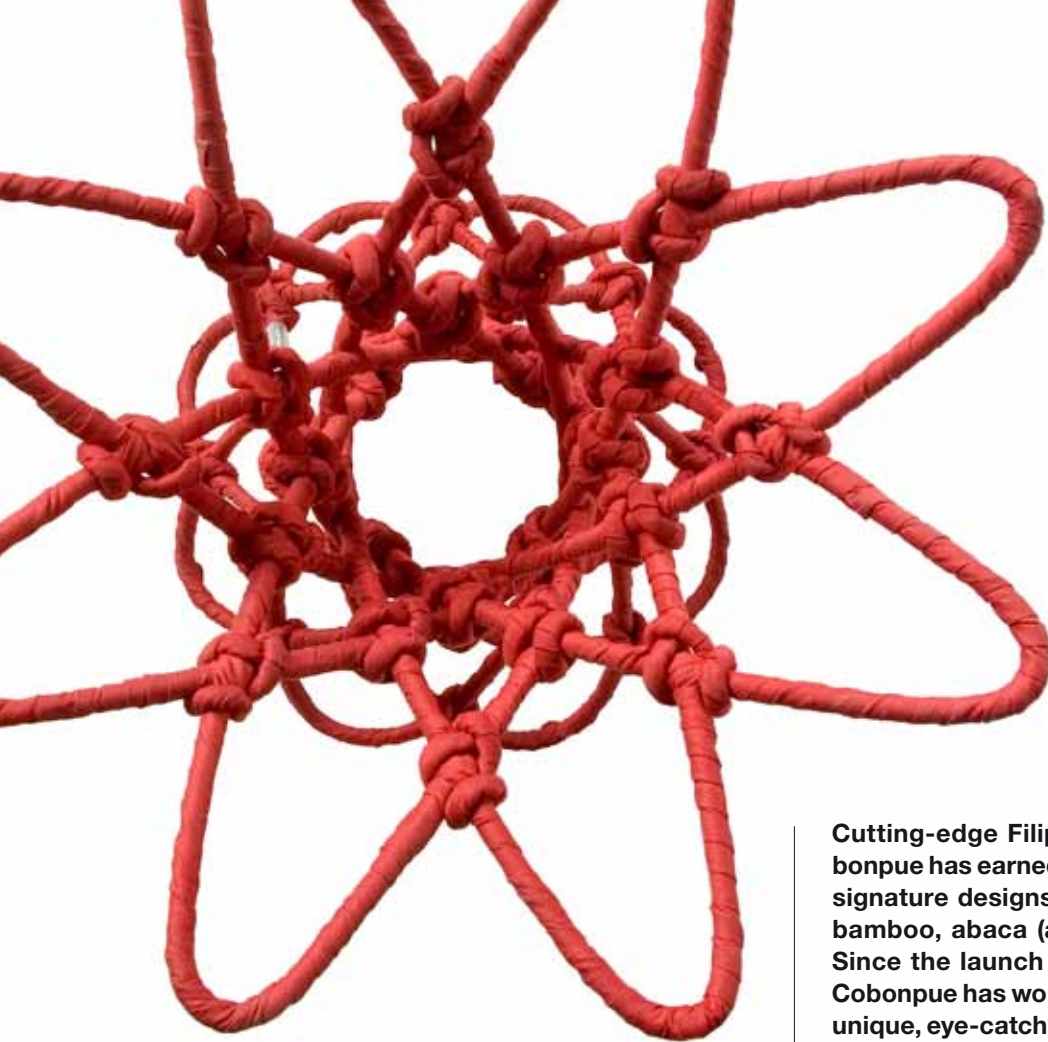
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FILIPINO DESIGN: Breaking New Ground



Phoenix explores the possibility of using sustainable natural materials in transportation design. The designers wanted to create a lightweight yet economically viable concept car made of bamboo, rattan, steel and nylon and powered by green technology. A team of skilled weavers and craftsmen constructed the Phoenix by hand in just 10 days.





Cutting-edge Filipino furniture designer Kenneth Cobonpue has earned international acclaim for his modern signature designs using natural fibers such as rattan, bamboo, abaca (a species of banana) and buri palm. Since the launch of the Yin & Yang chair in 1998, Mr. Cobonpue has won multiple international awards for his unique, eye-catching designs. In a recent interview with WIPO Magazine, Mr. Cobonpue talks about his work and the important role that intellectual property (IP) rights play in protecting it.

What inspires your work?

I am inspired by the forms and structures found in nature, the different cultures of the world and the skills of my people. Through my work, they eventually take on a life of their own.

How did you become involved in design?

My mother was a furniture designer and an inspiration for me. From a young age, she brought me to all the exhibits she took part in. I wanted to follow in her footsteps and to make designs that give joy to the people who use them. Although I am a designer, I am also part artisan because my work is organic and made by hand.

Why is design important?

Everything that surrounds us in our daily lives has been designed by a human or divine being. Its significance is beyond our comprehension. I try my best not to have a design philosophy, because I believe that puts creativity in a box.

What in your view makes a good design?

A design must be comfortable, beautiful and valuable enough for others to buy. Yes, it's that simple.

What is your favorite design?

My favorite design is always my next one.

OPPOSITE PAGE: dragnet dining table and lounge chair – inspired by fishermen's nets and created from fabric and wrapped around a steel frame.



Photos: Kenneth Cobonpue

Who has had the greatest influence on your work?

My wife is my aesthetic critic, my designers and craftsmen turn my dreams into reality, and my business partners keep my feet firmly rooted to the ground. Living in Europe and the US helped me to understand how the rest of the world lives. This is necessary when designing furniture for those markets. Our furniture company was started by my mother, so the people were already there. I only had to work with them on the designs.

What makes your designs stand out?

I wish I could define it, as that would make my work easier. Over the last decade, my designs have evolved. They never follow a formula. What is common to them all, however, is the high level of craftsmanship required to make each one and the striking simplicity that brings it close to art. My designs have textures, forms, materials and elements born from the handmade production process we use. That makes them warmer, tactile and more human. Southeast Asian design used to be characterized by the use of materials indigenous to the region but today, with the use of plastics and fabric, it's hard to tell if a design is Asian or Western.

How do you account for your design success?

I think it's the uniqueness of each design, and the marketing infrastructure that supports it.

Do you think it is easier for someone to become a designer today than it was when you started out?

It's harder to make a living as a designer today, because there are more and more people who want to be designers, and fewer positions to fill. The rate at which companies need new designs is lower than that at which schools churn out design graduates each year.

What inspired you to design the Phoenix concept car?

I always try my best to challenge myself and, one year, I decided to bring to life a recurring dream of mine – a lightweight, bamboo and carbon-fiber car powered by an electric engine. It was timely, because there was a design exhibition in Milan. I wanted to challenge the automotive industry with an idea. My woven bamboo car, the Phoenix, is made by hand, so it consumes minimal energy in production. It is light so it requires only a small engine, and it is biodegradable so it doesn't need to rot in some junkyard long after serving its purpose. The response has gone far beyond my expectations. We are working on an actual car right now with an international consortium.

“A design must be comfortable, beautiful and valuable enough for others to buy. Yes, it's that simple.”

What challenges do you face?

The challenges I face are common to every designer working in Asia today – how to erase the stigma of low-cost manufacturing and rising costs in our part of the world, coupled with the lack of technology and infrastructure. But of all the challenges we face, intellectual piracy is the biggest.

Why is it important for creators to be able to protect their designs?

It's frustrating and discouraging, to say the least, when our designs are stolen by others. The amount of research, testing and hard work that goes into a design is negated when a design is copied. For design to be treated seriously in Asia, it must be protected and promoted.

Today, I protect my work right away. I learned my lesson the hard way when I saw my mother's designs being stolen in the 1980s. It caused the whole family to suffer. We have successfully filed court cases in the last two years, and I foresee many more as the popularity of my work grows. It's important for me to go after the infringers in the country in which they manufacture, as well as the resellers. We get a lot of support from our dealer networks. Today, the Intellectual Property Office of the Philippines also has the necessary legal mandate to go after violators swiftly and decisively. It's never been better for IP enforcement.

Why is design important to a country like the Philippines?

Design is a key competitive advantage for a country like the Philippines as it moves up the value ladder. I dare say, in some sectors, it's the only advantage left.

Is your work helping to preserve traditional Philippine crafts?

Craft is dying in the Philippines, just like in other parts of the world. My work allows the craftsmen to make a good living from their skills. As long as this continues, the tradition of craftsmanship will live on. I have considered setting up operations elsewhere and explored this option a few years ago, but I find myself returning to my hometown because the skills needed to make my furniture can only be found here.

You describe yourself as the leader of a new movement incorporating new technologies with crafts. Can you explain this?

Today, so many cheap things are produced by machines, and their designs reflect that. All over the world, there is a resurgence in craftmaking and a rekindling of the love for handmade things. At the same time, there are so many new materials and technologies that are exciting and beautiful. I would like to be at the forefront of a movement that combines innovative handmade production processes and new materials. That is the future. ♦



Designer Kenneth Cobonpue:
“My favorite design is always my next one.”



Papillon – easy chair and ottoman

Photos: Kenneth Cobonpue

A selection of Kenneth Cobonpue's cutting-edge designs using a combination of natural and man-made fibers and materials.



Rapunzel – easy armchair and ottoman



Pigalle – barstool



Cabaret – coffee table



Yoda – side chairs

UGANDA: branding cotton, sesame & vanilla

By *Kristin Selleyfan*,
Freelance Journalist

Enabling small-scale farmers and producers to leverage the commercial value of their products is key to enhancing rural livelihoods in developing countries. In the context of the “IP and Product Branding for Business Development” initiative under its Development Agenda, WIPO has been working with a range of government and private stakeholders in Uganda – including the Cotton Development Organisation (CDO); UNACOFF, a rural development cooperative; Farmnet Ltd., a company working with small farmers to produce quality sesame for the food and pharmaceutical industries; and the Mukono Vanilla, Spices and Horticulture Cooperative Society – to support their efforts to enhance the value of their products using various intellectual property (IP) tools relevant to branding (e.g. certification marks, collective marks and trademarks). WIPO Magazine invited Kristin Selleyfan, who has filmed a documentary on the project, to give her perspective on what this initiative means to producers of three high-quality Ugandan agricultural products -cotton, sesame and vanilla.

How is intellectual property (IP) useful to agricultural producers? I met with various Ugandan farmers involved in an ongoing WIPO branding initiative to find out.

Agriculture is the most important sector of Uganda’s economy, employing 80 percent of its work force. In light of this, the country is taking steps to boost the value of three as yet underexploited agricultural products – namely, cotton, sesame and vanilla – to increase associated trade revenue using IP tools. “The special interest of this project, which is part of a WIPO initiative to promote business development in developing and least developed countries, is that through the use of appropriate IP tools and branding strategies, we will support local communities in their economic and social development,” explains Francesca Toso, manager of the WIPO project.

For Agaba S. Raymond, from the Ministry of Tourism, Trade and Industry, cotton, sesame and vanilla are obvious choices. “As a country, we’re looking at what we can market... and what can improve the incomes of the people. Uganda being agricultural, we are definitely looking at the agricultural products we have, asking if given products have a market – regional and international – and what potential they have to compete or even to develop.”

COTTON FARMERS ARE RARING TO GO

Introduced to Uganda in the early 20th century, cotton is the country’s second most important export crop, generating income for some 2.5 million people. Getachew Mengistie, an Ethiopian IP lawyer, former Director General of the Ethiopian Intellectual Property Office and WIPO consultant who was instrumental in obtaining trademarks for Ethiopian coffee producers, says that “Ugandan cotton is even, smooth as silk and has this bright, white bright color, which is demanded by customers. It doesn’t need any chemicals to have that color.” While these qualities are well known to buyers on the international market, Ugandan cotton producers do not benefit from the full commercial value of this quality good, which continues to be sold as a commodity rather than a premium product. Obtaining a certification mark for Ugandan cotton will go a long way in enabling producers to command higher prices on the international market.

The North Nile zone in northwestern Uganda is known for producing high-quality cotton. Richard Parwot, a lawyer, founder of the rural development cooperative UNACOFF, and cotton ginnery owner, explains that, in addition to its rich soil, the region boasts many farmers who are eager to develop. Mr. Parwot



Photo: Selleyfan/Dev.TV

who, together with his partner Phillip Upakrwoth, is helping the farmers open up new lands for cultivation, points out that in spite of their apparent poverty, these farmers are the actual landlords of Uganda. “That man and his family are actually rich, only they don’t know it... When we begin to show them how to use their land, in a small way, they begin to expand it themselves, and the expansion is unstoppable.”

I wanted to see if this was indeed the case. This is how I met with Aluma Gad, a young farmer who used to rotate cotton and sesame on one-acre plots, just like his forefathers. Mr. Gad has the distracted bearing of a man on a mission; and when he tells his story, it’s clear that he is.

In 2009, after meeting with Mr. Parwot and his partners, Mr. Gad decided to clear 10 acres of land for cotton and maize production. He says the result was akin to a miracle, and that he earned like never before – some 4.5 million Ugandan shillings, nearly US\$1,900. He hadn’t thought such a return possible. Before long, his 10-acre field seemed too small, so he expanded to plant cotton on 22 acres. Although international cotton prices this year are low, Mr. Gad is undeterred, noting that patience is a virtue when it comes to agriculture. He aims to put 50 acres under cotton cultivation within a couple of years.

Mr. Gad says there are many farmers like him, and they are all eager to see Ugandan cotton become a brand and sell at better prices. “Farmers are excited. They want to know when the branding system will actually start,” he says, “because we’re hearing that in some countries, those farmers whose crops are branded have good advantages... that also enable consumers to know where products come from.”

For Getachew Mengistie, branding will definitely increase the value of Ugandan cotton, and the use of branding and IP tools will enable Uganda to market its cotton differently. “By building the reputation and goodwill around a brand, you not only retain the customers that you have, you also create new customers and increase demand for Ugandan cotton,” he says.

SESAME: “BIG MONEY IN OUR HOMES”

The oil produced from the sesame (*sesamum indicum* L) grown in Uganda – one of Africa’s largest producers – is distinctive in that it is grown organically and has a very high oil content. Referred to locally as *simsim*, practically every farmer in the North Nile zone grows it in rotation with cotton. For Aluma Gad, the pressure to grow sesame comes mainly from the women: “You know in agriculture you need to talk to women! My mom likes sesame so much, because it’s food for consumption.” Here, planting sesame is an age-old tradition.

Owere Charles, a 41-year-old farmer, plants two varieties on his four acres – a high-yielding, improved variety and a smaller, lower-yielding, more humble sesame known simply as the local variety. This variety of sesame, however, is said to have the highest oil content in the world. According to Mr. Parwot it is possible to extract 56 percent of the oil from the first pressing. Some even claim that the oil content of the local variety is as much as 72 percent. Mr. Parwot explains that most of the sesame oils found on the market are either mixed with other oils, or heated more than necessary. He believes the North Nile zone variety is unique and has the requisite qualities to be branded as a pure, cold-pressed oil.

For now, Mr. Charles is hanging on to his local variety. Whenever he needs money, he sells some to a middleman in his village



for around 2,000 Ugandan shillings (less than a US dollar) per kilogram. He says the prices have gone down this year, but he has no other choice but to sell at buyer-imposed prices. He hopes that branding will change this, saying “if you brand the simsim we have, you know it comes from us, direct. You know that it is very pure, and it brings money – big money – into our homes.” For Mr. Charles, branding his sesame promises to enable him to improve his standard of living and to “get something good for my children”.

MUKONO VANILLA: “THE GRANDFATHER OF VANILLA”

John Nviri, known as “the grandfather of vanilla”, entered the car, and a subtle smell of vanilla filled the air. For the 79-year-old Mr. Nviri, vanilla has been a passion for well over 50 years. When Uganda regained its independence from British colonial rule in 1962, he says he was the only person in the country who knew how to grow vanilla. “I encouraged some of my farmers, some of my friends, to start growing vanilla,” he notes, “because, by that time, vanilla was used as a flavor.”

Today, Mr. Nviri is the chairman of the Mukono Vanilla, Spices and Horticulture Cooperative Society. Of its 6,000 members, 1,000 produce vanilla. Originally from Mexico, vanilla was introduced to Uganda in the 1950s. Although bourbon vanilla from Madagascar (previously known as the Ile Bourbon) currently reigns supreme on the world market, Ugandan vanilla is recognized as having the highest vanillin content in the world. Picked at its peak and carefully cured, Uganda’s vanilla, its “green gold”, has a rich, complex flavor with the cream soda and smoky notes associated with bourbon vanilla, but with spicy overtones.

Mr. Nviri took me to the vanilla gardens of a young farmer in Mukono, central Uganda, to show me what he calls the perfect product for branding. Mukono vanilla, which is 100 percent natural and organically grown, is, he believes, a name that deserves recognition on the world market.

Although the high quality of Ugandan vanilla is well known, the producers themselves reap little benefit from its reputation. Mr. Mengistie explains, “a farmer sells 1 kilogram of Ugandan vanilla for 8 dollars. The Ugandan exporter sells it for about 19 dollars, but foreign importers sell the same amount of vanilla for more than 120 dollars and the retailer sells it for more than 320 dollars. In fact, only 3 percent of the retail income comes back to Uganda.”

For Mr. Nviri, branding is the tool that will push the next generation of farmers to produce vanilla. Better prices will entice them to grow more vanilla which, in turn, will help them pay school fees, build better homes and improve the lives of their children.

TRANSLATING PLANS INTO ACTION

The process of obtaining IP rights for these three products – collective marks for cotton and vanilla and a trademark for sesame – is well under way. The IP and branding strategies that have been developed under the project “will guarantee the origin of the selected products, and establish the link between their unique and distinctive qualities and their geographical origin,” Mr. Mengistie explains. “They will also make it possible to maintain and enhance the reputation and goodwill of the products by putting into place a quality control and certification system that will enable a range of actors involved in the supply chain to use the brand (be it protected as a certification mark, a collective mark, a trademark or a geographical indication) and to share in the benefits derived from marketing a unique, high-value product.”

A law to protect geographical indications, which promises to bring additional opportunities to leverage the value of Uganda’s cotton, sesame and vanilla, is currently before parliament. Juliet Nassuna of the Uganda Registration Services Bureau anticipates that the bill will be approved some time this year.

However, for her the biggest challenge in Uganda remains the lack of awareness – at all levels – about IP rights and branding. “When we brand these products, it will help us talk to the farmers so that they understand there are some rights that accrue as a result of the registration of IP rights which help marketing and improve their incomes.”

Mr. Parwot, who works through UNACOFF with Uganda’s sesame farmers in the North Nile zone, acknowledges that even he did not fully understand the power of branding until he became involved with WIPO in the context of this project. It dawned on him that there were unique products in Uganda that could be branded to increase their competitiveness on the international market. He asks, “how can civil servants who have no background in marketing understand branding if it is not explained to them?”

Expectations are high among the farmers who have heard about IP and branding. They want to see results – and fast. Mr. Mengistie, however, has a word of caution for them: branding doesn’t happen overnight; results take time and resources. “*Café de Colombia* needed to be promoted for more than a decade to acquire the brand recognition that it enjoys now,” he stresses.

Who knows? Maybe in 10 years Ugandan cotton, sesame or vanilla will become household references, just like *Café de Colombia*. ♦

IP tools for branding

Trademarks	Signs used by a commercial entity to distinguish its goods from those of another entity.
Service marks	Signs used by a commercial entity to distinguish its services from those of another entity.
Collective marks	Signs used by members of an association to distinguish their goods or services from those of other entities.
Certification marks	Signs used to identify goods or services that comply with a set of standards and have been certified by a certifying authority.
Well-known marks	Marks considered to be well known on the market and that, as a result, benefit from stronger protection.
Geographical indications (GIs)	Signs used to identify goods that have a specific geographical origin and possess qualities, a reputation or characteristics that are essentially attributable to that origin. GIs are protected in accordance with international treaties and national laws, under a wide range of concepts, including laws specifically for the protection of GIs or appellations of origin (a special kind of GI), trademark laws in the form of collective marks or certification marks, laws against unfair competition, consumer protection laws, or specific laws or decrees that recognize individual GIs.
Appellation of Origin (AO)	The geographical denomination of a country, region or locality which designates a product originating therein that has qualities or characteristics that are due exclusively or essentially to the geographical environment, including natural and human factors.
Basic difference between a GI and an AO	The basic difference between a GI and an AO is that the link with the place of origin is stronger in the case of AOs than for GIs. One way in which this has been expressed in national laws is to require AOs to source the raw material from the area of transformation or processing, whereas for GIs the raw materials can be sourced from outside the GI area with the requirement that transformation of the product take place in that area.



Photos: Seleyfan/Dev.TV



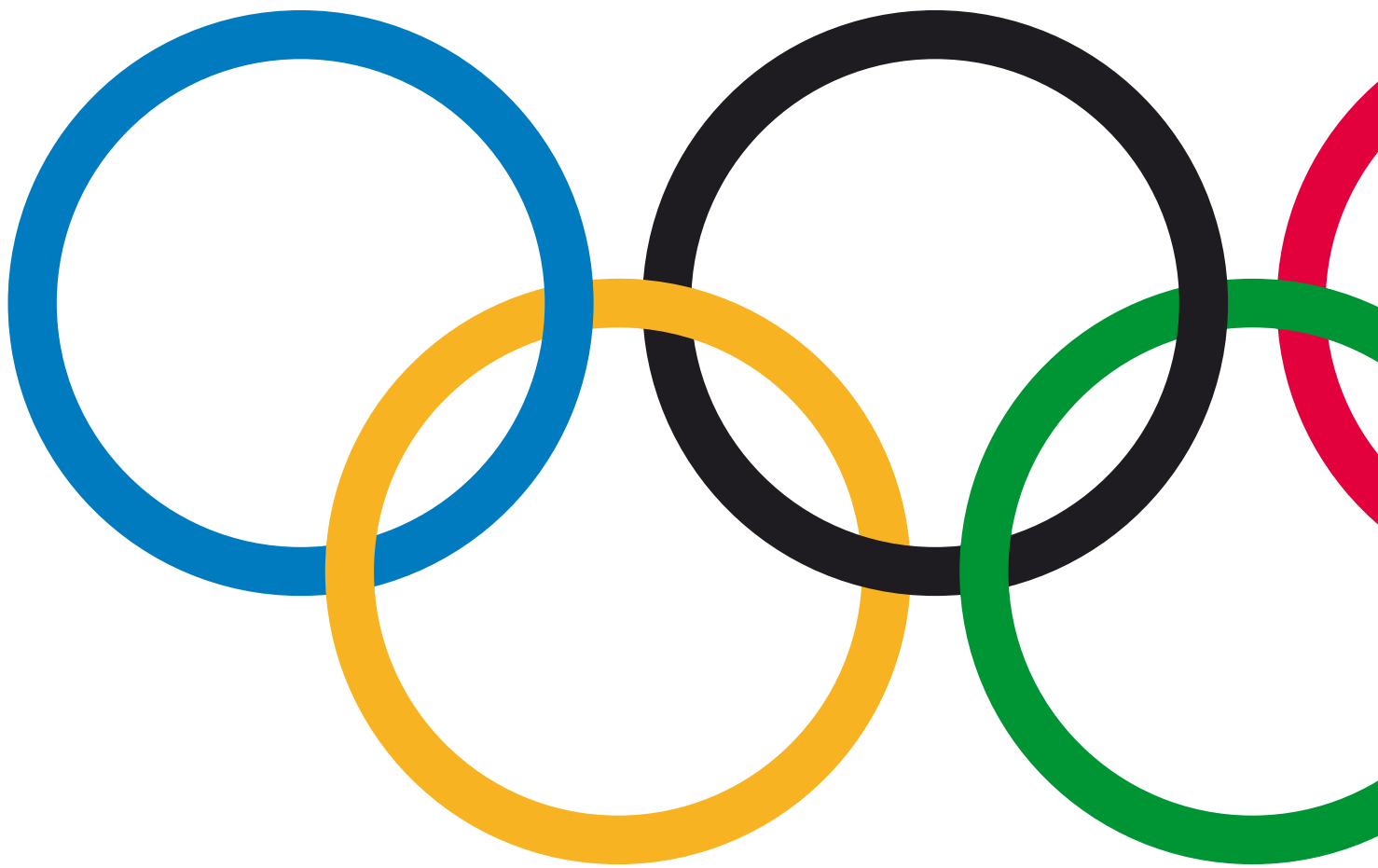
Branding Uganda's high quality sesame oil promises to improve livelihoods.

Cotton is Uganda's second most important export crop. Use of the intellectual property system will help transform Ugandan cotton into a high-value premium product.

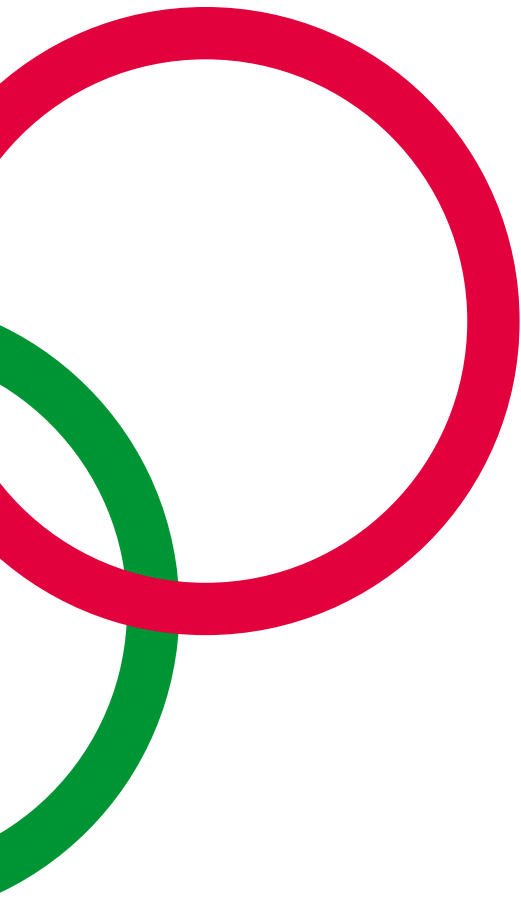
Ugandan vanilla has the highest vanillin content in the world. Local producers hope that by acquiring a certification mark they will be able to command higher prices in the market and improve their living standards.

THE OLYMPIC PROPERTIES

*By Marianne Chappuis,
Trademark Legal Counsel,
International Olympic Committee*



This iconic Olympic symbol enjoys special protection under the Nairobi Treaty on the Protection of the Olympic Symbol. States that have signed up to the Treaty are obliged to refuse or invalidate the registration as a mark and to prohibit the use for commercial purposes of any sign consisting of or containing the Olympic symbol, except with the IOC's authorization.



In the run-up to the London Olympic Games which will get underway on July 27, 2012, this third article in WIPO Magazine's IP and Sport series explores how the International Olympic Committee (IOC) protects the visual symbols of the Olympic Games, the so-called Olympic properties, that are so familiar.

Olympism is a philosophy of life that places sport at the service of humankind. The Olympic Movement encompasses concerted, organized, universal and permanent action, carried out by many individuals and entities who are inspired by the values of Olympism under the overall umbrella of the IOC. It brings together athletes from across the globe for one of the world's most well-known and celebrated sporting, cultural and entertainment events – the Olympic Games.

The Olympic properties, in particular the Olympic symbol, are the visual ambassadors of Olympism. The Olympic symbol, seen by millions of people throughout the Olympic Games, is one of the world's most recognized brands. The five interlocking rings represent the coming together of five continents and symbolize the Olympic values: striving for excellence, demonstrating respect and celebrating friendship. The Olympic properties have become iconic – they are more than just “logos”. People around the world associate them with the fundamental values of sport and of the Olympic Movement.

Because of their honored place on the world stage, it is essential that the IOC protect its Olympic properties at the international level. The IOC benefits from special legal means to do this but it also relies on ordinary means of trademark protection.

THE OLYMPIC PROPERTIES DEFINED

The Olympic Charter is the codification of the Fundamental Principles of Olympism, Rules and Bye-Laws adopted by the IOC. According to Rule 7 of the Charter, the Olympic properties include the Olympic symbol as well as the Olympic flag, motto, anthem, identifiers (such as “Olympic Games” and “Games of the Olympiad”), designations, emblems, the Olympic flame and torches.

All rights to any and all Olympic properties belong exclusively to the IOC, including rights to their use such as in relation to profit-making, commercial or advertising purposes.

FINANCING THE OLYMPIC GAMES

The IOC and the organizations that make up the Olympic Movement are entirely privately funded.

Support from the business community is crucial to the holding of the Olympic Games, one of the most effective international marketing platforms in the world, reaching billions of people in more than 200 countries and territories across the globe. The IOC distributes more than 90 percent of its revenues to organizations throughout the Olympic Movement to support the staging of the Olympic Games and to promote the development of sport worldwide.

Broadcasting the Olympic Games is the most important means of communicating the Olympic ideals worldwide. The primary broadcasting objective is to ensure that the widest possible audience has an opportunity to experience the Olympic Games. As the owner of the global rights for the Olympic Games – including broadcasts on television, radio, mobile and Internet platforms – the IOC grants its partners exclusive rights to this effect in their respective territories.

The IOC's worldwide sponsorship program, The Olympic Partner (TOP) Programme, was established to enable long-term corporate partnerships of benefit to the Olympic Movement. The TOP Programme provides each worldwide partner with exclusive global marketing rights and opportunities within a designated product or service category.

Consequently, the IOC must be able to protect the exclusivity granted to its broadcast and marketing partners, and therefore needs to have the necessary means to prevent third parties from making any unauthorized association with the Olympic Games.

PROTECTING THE OLYMPIC PROPERTIES

Numerous countries have adopted permanent national legislation protecting the Olympic properties. Although the Olympic Movement's efforts have contributed to the implementation of legislation, the parliaments that have adopted such measures also understand the importance of sport and the Olympic Movement, as well as the need to protect the properties related to them.

Adopting specific legislation has also proven necessary in countries that host an edition of the Olympic Games. Such legislation concerns not only the protection of the Olympic properties, but also provides the means to fight against ambush marketing and to regulate advertising, in particular in and around Olympic venues. The first specific legislation related to an edition of the Olympic Games appeared in Canada prior to the Montreal 1976 Olympic Games. Since the Sydney 2000 Olympic Games, all host countries have adopted such legislation; this is also true for future editions of the Olympic Games, such as Sochi 2014 and Rio 2016.

In relation to the London 2012 Olympic Games, the UK Parliament has adopted the London Olympic and Paralympic Act. This legislation extends legal protection to all properties associated with the London 2012 Olympic and Paralympic Games. Moreover, it forbids any entity from associating itself, or its products or services, with the Olympic Games to gain a commercial advantage, unless expressly authorized to do so by the London 2012 Organising Committee (LOCOG). The law also provides local authorities and LOCOG with the means to fight ambush marketing efficiently, and to prevent the unauthorized sale of Olympic tickets and other ambush marketing activities at an Olympic venue or in the air space surrounding it.

THE NAIROBI TREATY

The IOC also benefits from an exceptional international legal instrument that protects the Olympic symbol. Adopted in 1981 and administered by the WIPO, the Nairobi Treaty on the Protection of the Olympic Symbol obliges each state that has ratified it to refuse or invalidate the registration as a mark and to prohibit the use for commercial purposes of any sign consisting of or containing the Olympic symbol, except with the IOC's authorization.

TRADEMARK PROTECTION

The IOC is the worldwide owner of numerous trademarks protecting its Olympic properties. While this might seem logical, the IOC had to wait some 100 years before it could



The official logo of the 2012 Summer Olympic Games is registered under WIPO's Madrid System for the International Registration of Marks.

register trademarks in its own name. Prior to 1993, numerous national trademark laws (including in Switzerland, where the IOC is based) reserved the right to register trademarks only for commercial companies. As a non-profit association, the IOC had to wait for the harmonization of European law and the modification of Swiss law such that any entity could register a trademark in its name.

The IOC registers trademarks, in particular through the WIPO Madrid system, relating to its permanent properties (which are common to each edition of the Olympic Games), such as the Olympic symbol and the words “Olympic”, “Olympiad” and “Olympic Games”. It also seeks protection for identifiers related to a specific edition of the Olympic Games, such as the official emblem of that edition of the Olympic Games and the City+Year word mark – for example, “London 2012” and “Sochi 2014”.

IMPLEMENTING THE IOC’S RIGHTS

In the routine management of its intellectual property (IP) rights, the IOC encounters certain challenges, some of which are described below.

INTERNET AND SOCIAL MEDIA PLATFORMS

Internet and social media platforms are fantastic opportunities to engage new audiences, especially the young. The IOC is embracing this opportunity and has a presence on several major social media platforms. However, from an IP point of view, it is important for the IOC, like other trademark owners, to control the use of its properties on such platforms, in particular in relation to the numerous possibilities for third parties to make unauthorized use of Olympic properties.

The IOC works closely with social media platforms to prevent unauthorized use of its properties. It also closely follows the Internet Corporation for Assigned Names and Numbers (ICANN) project, opening the door to new extensions of top level domain names, in order to protect its Olympic properties on the Internet.

AMBUSH MARKETING

Ambush marketing consists of attempts to create a false, unauthorized or misleading commercial association with the Olympic Movement or the Olympic Games. It includes a third party’s use of creative means to generate a false association with the Olympic Movement or Olympic Games; infringement of the various laws that protect the use of Olympic properties; and interference with the legitimate marketing activities of Olympic partners.

Some companies that are not official partners try to associate themselves with the unique and worldwide character of the Olympic Games free of charge. This is unfair vis-à-vis companies that financially support the Olympic Games as well as to the participating athletes. The creativity of these ambushers

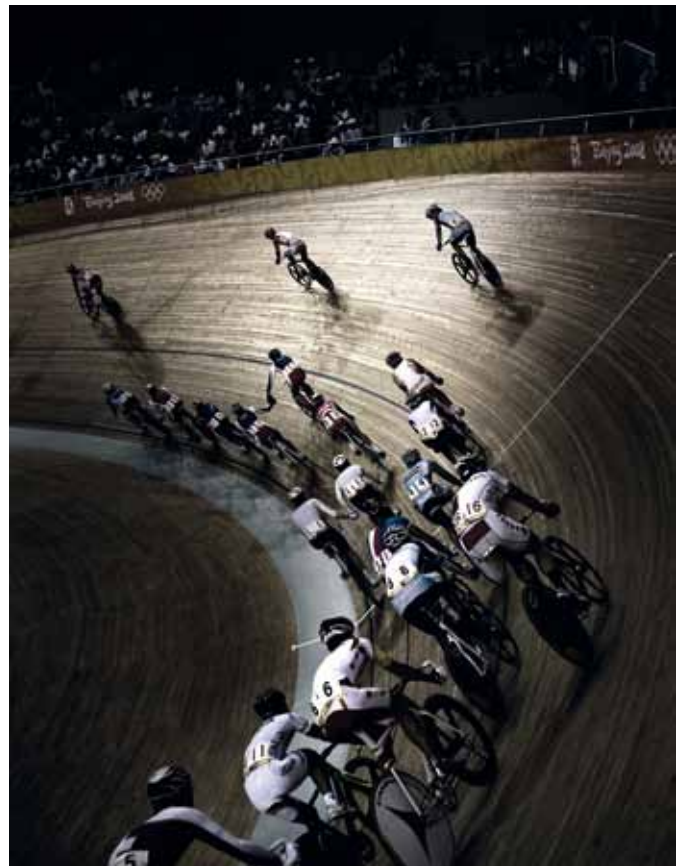


Photo: IOC/John Huet

makes it necessary to adopt specific national legislation to prevent ambush marketing. However, as these laws are in force only in the host territory, the IOC must invoke, in other territories, ordinary legal means to fight ambush marketing, such as trademark registration or unfair competition. However, these sometimes do not go as far as the IOC would like.

PROTECTION OF THE CITY+YEAR WORD MARK

In 1993, before Sydney was elected to host the 2000 Olympic Games, a third party filed for registration of all the names of the candidate cities for the 2000 Olympic Games, in numerous countries, and then threatened the IOC partners with legal action if they used these references.

To prevent such abuses in the future, the IOC subsequently took steps to protect the City+Year identifiers, well before a city is selected to host an edition of the Olympic Games.

Some court decisions, however, have called into question the distinctive character of a trademark composed of a city and a year. The distinctive character of a mark acquired after its lengthy use is a known remedy for an initial potential lack of distinctiveness. However, numerous trademark offices around the world accept that, in the specific case of the Olympic Games, and given the exceptional worldwide interest in, and media coverage of, a city's election by the IOC, distinctiveness is acquired the moment the result is announced. It is widely recognized that the "City+Year" identification of the Olympic Games immediately gains considerable notoriety and continues to increase in attractiveness and distinctiveness, peaking during the actual holding of the Olympic Games.

The Olympic Games are one of the most well-known sporting events in the world. Protecting the Olympic properties is, therefore, very important. The IOC benefits from a privileged situation thanks to the existence of the Nairobi Treaty, as well as national legislation to protect the Olympic properties and combat ambush marketing in certain territories. However, ordinary legal protection, such as trademark protection, remains essential. Like many other trademark owners, including sports governing bodies, the IOC faces a number of new challenges in managing its IP, in particular in relation to social media platforms.

While the IOC considers the advent of social media an opportunity for sports bodies to engage new generations of fans and participants, it must face the new challenges they pose in terms of managing the Olympic properties. Close collaboration with the providers of these services, will undoubtedly go a long way in mitigating this risk. Judicious management of the Olympic properties will help ensure that people of all ages and from all continents can continue to take part in the spectacle and celebrate the values that underpin the Olympic Games for generations to come. ♦



Photo: IOC

The London Olympic Torch designed by Barber Osgerby. The gold-colored torch is perforated by 8,000 circles representing the 8,000 torchbearers who will carry it on its 70-day relay around the UK.



NIGERIA'S

anti-piracy drive yields

results

*By Afam Ezekude,
Director General,
Nigerian Copyright Commission*

Nigeria is home to a rich and dynamic creative sector. Star among these is Nollywood, the world's third largest film industry with annual revenue in the region of US\$ 200 to 300 million. Nigeria's creative industries, however, stretch far beyond the film industry, and include activities ranging from music and publishing, to computer software and media broadcasting – each with enormous potential for growth. Preliminary data indicate that while Nigeria's copyright-based industries contribute as much as 1.2 trillion naira (US\$ 7.5 billion) each year to the Nigerian economy, they have the potential to contribute between 5 and 10 percent annually. If we are to fully realize the potential of our creative industries and if Nigerians are to reap the multiple benefits this promises, we need to create an environment in which the rights of creators are respected – an environment with zero tolerance for piracy.

THE FAR-REACHING CONSEQUENCES OF PIRACY

In spite of this enormous growth potential, widespread piracy is undermining the growth of Nigeria's creative sector. Right owners who have invested enormous energy, time and money in producing sound recordings, films, books and computer programs suffer huge losses in revenue. As a consequence, creators of genuine copyright-protected products are discouraged from setting up their operations in the country. The government loses much-needed tax revenue to fund public services, and the country as a whole loses out on its ability to attract foreign direct investment, and to harness opportunities for technology transfer.

CAUSES OF PIRACY

The causes and motives for piracy are many and varied. In Nigeria, its prevalence is attributable to a number of significant contributory factors – the scarcity and high cost of genuine products, poverty, poor distribution networks, a slow judicial system, poor cooperation in some quarters of the creative sector and inadequate funding of regulatory agencies, including the Nigerian Copyright Commission (NCC). These enduring problems are further compounded by the challenges posed by new digital technologies which, themselves, create opportunity for illegal mass reproduction of copyright-protected works.

ZERO TOLERANCE

Given the economic importance and growth potential of Nigeria's copyright sector and in light of the far-reaching negative economic impacts of piracy, the Nigerian government has adopted a policy of zero tolerance with regard to piracy. It falls to the NCC, the country's top regulatory and enforcement agency for copyright, to put this policy into practice.

Efficient enforcement of copyright is a critical element in enabling the future development of Nigeria's creative industries. Since its establishment in 1989, following implementation of Copyright Decree No. 47 of 1988, the NCC has worked tirelessly to clamp down on piracy. Campaigns such as the Strategic Action Plan against Piracy

(STRAP) and the Copyright Litigation and Mediation Program (CLAMP), launched in 2005, are testimony to this (www.wipo.int/wipo_magazine/en/2008/05/article_0009.html). Since December 2010, however, the NCC has intensified its copyright enforcement and anti-piracy activities. The underlying objective is to minimize piracy levels in order to provide an environment conducive to the growth of legitimate copyright industries in Nigeria, an environment in which the rights of creators are respected.

While domestic production of pirated works has been significantly reduced – thanks to the adoption in 2007 of a regulatory framework for registering and monitoring optical disc replicating plants – there is an international element to the high level of copyright piracy in Nigeria, with the influx of significant numbers of infringing works from Asian countries.

In December 2010, the NCC launched a campaign for collective action to tackle piracy on all fronts. Our aim is to send a strong signal to piracy syndicates around the world that it is no longer “business as usual” in Nigeria. The broad-based program seeks to build a proactive, intelligence-based copyright enforcement and regulatory system by creating an expanding network of strategic partnerships and alliances with key stakeholders at home and abroad. These include private sector stakeholders, the right holder community and sister regulatory and enforcement agencies.

On the domestic front, the NCC’s close cooperation with the Nigeria Police Force (NPF) is critically important, especially in terms of ensuring the safety of the Commission’s unarmed Copyright Inspectors during anti-piracy raids across the country. The Nigeria Customs Service (NCS) also plays a key role in tracking down infringing goods at entry ports and land borders, making it possible to identify and seize large consignments of imported, pirated works that would otherwise flood the market and undermine legitimate business interests. Joint anti-piracy operations are also carried out with the Economic and Financial Crimes Commission (EFCC), whose invaluable intelligence enables us to more effectively target our operations.

Partnerships with national and international rights groups and stakeholders such as the Nigeria Publishers Association (NPA), the National Association of Recording Industries (NARI), the Music Label Owners and Recording Industries Association of Nigeria (MORAN) and the International Federation of the Phonographic Industry (IFPI), as well as various private sector actors including Multichoice Nigeria, Ltd. and Microsoft, are also yielding positive results.

In line with the NCC’s mandate to enhance awareness and enforcement of copyright, we are rolling out the Copyright Marshal Scheme, whereby individuals drawn from different creative industries act as copyright marshals supporting the NCC’s efforts to boost awareness and efficiently regulate and enforce copyright in Nigeria.

“Intellectual property is where the future of our country lies.”

Participants in the Copyright Marshal Scheme

Film Image Professional and Motion Picture Practitioners Association (Kannywood)
 Nigerian Publishers’ Association
 Association of Movie Producers
 Nigerian Music Industry Coalition
 Music Label Owners and Recording Industries Association of Nigeria (MORAN)
 National Association of Recording Industries (NARI)
 Association of Nigerian Theatre Practitioners
 United Movie Producers’ Association of Nigeria
 Microsoft (Anglophone West Africa)

Although the scheme has not yet been formally launched, we are already working closely with appointed marshals and relying on them for information on piracy syndicates and their operations. These individuals play a key role in mobilizing the support of stakeholders, identifying seized goods and broadly disseminating information and publicity materials.

The NCC has also established strategic alliances with a number of development agencies and international organizations such as the Swedish International Development Agency (SIDA), as well as with WIPO, the United Nations Conference on Trade and Development (UNCTAD), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the African Regional Intellectual Property Organization (ARIPO) and the World Customs Organization (WCO), to enhance the scope and effectiveness of its anti-piracy operations and awareness drive.

Thanks to our expanding network of collaborators, the NCC has been able to step up prosecution of copyright infringement and to give real bite to its enforcement interventions. In the course of 2011, the Commission undertook 26 anti-piracy raids, made 145 arrests and seized over 6 million pirated works – including films, sound recordings, books, software and broadcast equipment – with a street value of some US\$ 4.6 million. Of the 39 criminal cases brought by the NCC following these raids, 19 convictions relating to pirated books, CDs, software and broadcasts have been secured. A number of these convictions are notable in that they involve the most stringent sentences ever handed down by Nigerian courts for copyright infringement. This is all part of our endeavor to render piracy a high-risk, unprofitable business with tough penalties.

REVIEW OF LEGAL FRAMEWORK

In addition to these hard-hitting practical measures, the Nigerian Copyright Law is also undergoing a process of review to bring it into line with current international standards designed to mitigate the copyright challenges that digital technologies present.

Proposed amendments include provisions that will make it an offense to circumvent technological protection measures (TPMs) and to manufacture and distribute circumvention devices. Similarly, any alteration of rights management information on a copyright-protected work, or trafficking of such works with the knowledge that this information has been altered or removed, will be considered an offense. Provisions concerning the take-down of infringing materials by Internet service providers will help address the issue of online piracy.



photos: NCC

Copyright inspectors and policemen during an anti-piracy operation.

Chief Tony Okoroji, Chairman, Copyright Society of Nigeria (COSON) examines some of the pirated materials.

Director General of the Nigerian Copyright Commission, Afam Ezekude, ignites confiscated pirated works sending a strong message to piracy syndicates that it is no longer “business as usual” in Nigeria.



In January 2012, the NCC publicly destroyed some 722 million pirated works confiscated in anti-piracy raids between 2007 and 2011.

The review also proposes higher penalties as a deterrent to committing offenses under the Act. For instance, the fine per copy of infringing material has been increased from 100 naira to 500 naira. Similarly, serious offenses under the Act will carry terms of imprisonment ranging from 2 to 7 years. Such offenses include making, causing to be made or being in possession of equipment for the purposes of making an infringing copy; as well as unauthorized distribution of works by way of rental, lease hire or similar arrangements. Moreover, the authority to apply to court for the destruction of seized infringing materials, hitherto reserved for the right owner and the Attorney General, will be revised and vested in right owners and the Commission's Copyright Inspectors. This will enable the NCC to expedite disposal of infringing materials seized in the course of anti-piracy activities, saving time and money.

Provisions relating to copyright infringement by corporations are also under review. The aim is to give courts the authority to close down any corporation convicted of copyright infringement under the Act, and thereby discourage the involvement of organizations in piracy.

Beyond criminal provisions, the amendment also seeks to improve rights management by providing for the registration of copyrighted works. The establishment of a national database of authors and right holders in Nigeria offers an additional means of combating piracy by making it easier to prove (or disprove) ownership of a copyright-protected work.

In sum, the proposed amendments seek to render copyright infringement unattractive to prospective infringers, further support the creation of a piracy-free environment and boost the growth of legitimate creative businesses.

CHALLENGES

Intellectual property (IP) has enormous potential in terms of promoting wealth creation, alleviating poverty, generating employment and boosting economic development in general. While we recognize the blight that piracy inflicts on legitimate business and are tackling this head on, low levels of IP awareness among key economic and political actors continue to inhibit progress in translating the promise of the nation's creativity and innovative capacities – its IP – into concrete economic benefit. We can ill afford not to invest in our creative industries. We need to create a piracy-free environment in order for our creative industries to flourish. As recently observed by Chief Tony Okoroji, Chairman of the Copyright Society of Nigeria, "oil will end while intellectual property is where the future of our country lies." ♦



MARVEL'S SUPERHERO LICENSING

*By Nicole J. S. Sudhinda,
Attorney and Former
WIPO Consultant.*





Comic books, once associated with geeky adolescent boys and low-budget entertainment, now are linked to celebrities and big money. What's changed since the dawn of the concept in the 1930s? Movies!

While television shows based on comic books have been successful over the years, it is the film industry that has made characters like Superman and Spider-Man world renowned.

Marvel, one of the original comic book producers, has since 1939 created almost 8,000 characters, including Iron Man, Spider-Man, the Hulk, Blade, Thor, the X-Men and the Fantastic Four. Acquired by the Walt Disney Company in 2009, Marvel often outperforms its rival, DC Comics (owned by Time Warner) – which produces Batman, Superman and Wonder Woman – in the volume and dollar value of its monthly comic sales.

As a company based almost entirely on creative assets, it is no surprise that intellectual property (IP) plays a key role in Marvel's fortunes.

IP RIGHTS & MARVEL'S CHARACTERS

IP protects comics in two main ways: through copyright and trademark law. Copyright protects an original storyline, characters and graphical elements, and gives creators the power to control the way in which their works, and the characters they create, are used.

COPYRIGHT PROTECTION

Most comics are underpinned by the notion of a battle between good and evil. While this broad idea itself does not qualify for copyright protection, an author's unique interpretation – the storyline and the characters developed to play out this battle – does. Comic book writers and artists, who are essential in

creating storylines and characters, are often employed by comic book publishers. In many jurisdictions, including in the US, when artistic creations are produced in this way, they are considered works made for hire, and the copyright in these works automatically vests in the employer.

In 2009, the estate of the comic book artist, Jack Kirby (1917-1994) brought a case to assert rights in a number of works appearing in Marvel editions between 1958 and 1963 that he had co-created. However, the United States District Court Southern District of New York determined that Marvel held the copyright in the works created by Mr. Kirby. It held that Mr. Kirby's work "qualifies as work-for-hire under the [US] Copyright Act of 1909," which governs works made before January 1, 1978. Mr. Kirby had been paid a flat per-page rate for the artwork and scripts he, and other freelance artists and writers, produced in line with the plot outlines or scripts provided by Stan Lee, Marvel's long-standing editor-in-chief. The court concluded that Mr. Kirby did not create the artwork... until [Stan Lee] told him to" and so did not own the copyright in those works. Mr. Kirby's estate filed an appeal with the US Court of Appeals, Second Circuit in August 2011.

While Mr. Kirby could not have anticipated the widespread and enduring popularity of the superheroes he co-created, nor the subsequent evolution of copyright law, this case offers a salutary lesson on how important it is for creators to understand the ins and outs of copyright law, as well as the need to future-proof the strategic management of their works.

TRADEMARK PROTECTION

Comics may also be protected under trademark law. Trademarks are used to protect the names and likenesses of Marvel's comic book superheroes. This protection has been key

to enabling Marvel to build and secure sizeable revenue from character merchandizing, an activity that has been further boosted by the company's movie licensing strategy.

In the early 1980s, comic book fans associated the term “superhero” and its variations so closely with characters featured in Marvel's storylines and those of its rival DC Comics, that the two companies were able to co-register the name “SUPER HEROES” as a mark for use on toys (US Reg. No. 1140452 – Oct. 14, 1980) and comic books (US Reg. No. 1179067 – Nov. 24, 1981). These registrations are still active, although many comic book fans and legal professionals question the appropriateness of granting such rights over what is arguably a descriptive generic term.

LICENSING MAGIC

As holders of the IP rights in its creative works, Marvel has been able to leverage the commercial value of its superheroes through a series of profitable licensing agreements. These agreements define and structure the business relationship between the licensee and the licensor, outlining the terms and conditions by which a manufacturer may produce, for example, a toy in the likeness of a given character.

From the late 1970s to the early 1990s, Marvel's licensing strategy enabled it to distribute its characters beyond comic books to multiple media formats, including films, television, and video games. Today, Marvel's merchandizing reach has no limits, and can include anything from toys to perfume and clothing to luxury cars. During this period, Marvel sold options to major studios to produce films based on its characters. Despite the success of its character-licensing business, Marvel was keen to acquire full control over its creative assets and a greater stake in the box office returns generated by these movies. The creation of Marvel Studios in August 1996 was an important step in achieving this goal.

A MOVE TOWARDS FILM PRODUCTION

In September 2005, Marvel Studios came into its own when it announced a US\$ 525 million credit facility that would allow it to finance its own production of up to 10 films based on Marvel characters.

The Marvel Universe is made up of a fantastic array of iconic characters. While most Marvel superheroes have their own comic book and storyline, their lives often intertwine in the Marvel Universe in which they all co-exist. At times a major event occurs in the Marvel Universe causing the superheroes to take collective action to save the Earth, the Universe or themselves. In the comic books, the team known as “The Avengers” – which regularly includes Captain America, Iron Man, the Hulk, Thor, Black Widow and Hawkeye – frequently team up with Spider-Man, the Fantastic Four and the X-Men to fight a common foe (and sometimes even each other) in major cross-over events. Adapting these crossover comic book storylines into an action



Photos: Marvel Worldwide, Inc.

OPPOSITE PAGE: Marvel, one of the original comic book producers, has since 1939 created almost 8,000 characters.

Within a month of its release, *Marvel's the Avengers* grossed over US\$1.3 billion in box office revenue worldwide to become the highest ever overseas gross for a comic book adaptation.





movie would be a challenge for Marvel, not least because of its earlier emphasis on licensing its characters to major film studios. For example, Marvel licensed Spider-Man to Sony Pictures Entertainment in 1999; the Hulk character to Universal Pictures which released Ang Lee's *Hulk* in 2003 and film rights to characters featuring in 20th Century Fox's movies *X-Men* (released in 2000) and *Fantastic Four* (released in 2005). 20th Century Fox still has a license on the characters featured in these films.

Marvel Studios has only recently been able to regain the film rights to enough of its top-tier characters to make up the team of iconic superheroes featuring in its box office hit, *Marvel's The Avengers*. The film recounts the story of how Nick Fury of S.H.I.E.L.D. brings together a team of superheroes – Captain America, Iron Man, the Hulk, Thor, Black Widow and Hawkeye – to form The Avengers to help save the Earth from Loki and his army.

In 2005 Marvel was able to claw back movie rights to Iron Man from New Line Cinema, whose film option had expired after several years of unsuccessful development. This paved the way for the successful release of the movies *Iron Man* and *Iron Man 2*, in 2008 and 2010. Similarly, Marvel regained film rights to the Hulk from Universal Studios, thanks to a clause whereby rights revert to Marvel if principal photography (the part of filming with actors on camera) or significant payments towards filming are not initiated by a specified date after the first film's release.

The question is: will Marvel be able to regain film rights to Spider-Man, one of its most popular superheroes? These rights have been caught in a complex web of licensing since 1985. After several rounds of litigation involving, principally, Marvel and Metro-Goldwyn-Mayer, Inc., which claimed to have acquired the film rights from a series of well-known but now defunct studios, the courts determined that Marvel owned the film rights to Spider-Man. It subsequently licensed these rights to Columbia Pictures Industries, Inc. (owned by Sony Pictures Entertainment) in 1999, which went on to make *Spider-Man* (2002), *Spider-Man 2* (2004), *Spider-Man 3* (2007) and the upcoming *The Amazing Spider-Man* to be released in summer 2012.

About Marvel's licensed superheroes

Iron Man, also known as Tony Stark, is a brilliant, rich inventor who creates a high-tech armored suit to become a superhero. He is a founding member of The Avengers.

The Hulk is the transformation of scientist Bruce Banner, who was exposed to a blast of gamma radiation. During moments of stress, Bruce Banner turns into the brutish green force that is the Hulk, who is a key member of The Avengers.

Spider-Man, a more recent addition to The Avengers as portrayed in the comic books, is Peter Parker, a high school boy who was bitten by a radioactive spider and endowed with spider-like powers. Driven by the death of his uncle, Spider-Man fights evil and lives by the trademarked phrase, "With great power comes great responsibility". Introduced to the Marvel Universe in 1962, Spider-Man remains one of the most famous superheroes.

Wolverine is a mutant with retractable claws and unlimited healing powers and member of The New Avengers team. 20th Century Fox licensed Wolverine from Marvel in 1994 as part of the *X-Men* and went on to produce the *X-Men* trilogy: *X-Men* (2000), *X2* (2003) and *X-Men: The Last Stand* (2006) as well as two prequels, *X-Men Origins: Wolverine* (2009) and *X-Men: First Class* (2011). While comic book fans would welcome seeing Wolverine among the ranks of The Avengers, this is unlikely to happen on the big screen.

Comic book character and S.H.I.E.L.D. Agent Natasha Romanoff aka Blackwidow, played by Scarlett Johansson, is one of the world's greatest spies and one of its most skilled assassins.

Comic book character Clint Barton, aka Hawkeye, played by Jeremy Renner, is one of S.H.I.E.L.D.'s most elite agents and the greatest living marksman on earth.

The eccentric genius, billionaire playboy and philanthropist Tony Stark, played by Robert Downey Jr., is also the armored superhero known as Iron Man.

Following exposure to a blast of gamma radiation, the mild-mannered scientist, Dr. Bruce Banner, transforms, when angered, into the uncontrollable, green-skinned monster known as The Hulk.

The frail Steve Rogers, played by Chris Evans, was transformed into the powerful and heroic Captain America following a top-secret Super Soldier program.

LESSONS LEARNED

Marvel's robust IP assets have without a doubt enabled it to reap enormous benefits from its licensing activities. Its low-risk movie-licensing strategy has meant that film studios carry all the financial risk in developing the film, while creating multiple marketing opportunities for Marvel. Even where a film, such as Ang Lee's *Hulk*, disappointed at the box office, Marvel enjoyed significant revenue from film-related merchandise sales and an upsurge of interest in its comic books. Sales of the role play toys known as "Hulk Hands" (a pair of large costume gloves), for example, have been valued at US\$100 million. Moreover, Marvel's astute business strategy has enabled it to further leverage the commercial value of its characters by striking licensing deals across multiple media platforms.

The down side, however, is that now that Marvel Studios is a fully-fledged filmmaker, it is still bound by pre-existing movie licensing agreements and therefore cannot readily use all of its top-tier superheroes to reenact some of Marvel Universe's hallmark epic comic book battles. However, its rich stable of characters along with a degree of serendipity have made it possible to pull together a superhero cast in *Marvel's The Avengers* that is sufficiently mesmerizing to keep fans happy.

When asked whether Marvel Studios was considering ways to bring film-licensed characters back home in an interview with *HeyUGuys*, Kevin Feige, Marvel Studios' President said, "the contracts are all very specific, and if there is ever a time for them to revert, they will. But right now they are safely at those studios... The truth is... there are almost 8,000 characters in the Marvel library... and not all of them would make a movie, but a lot of them will." ♦



WIPO GREEN: Facilitating Dissemination of Green Technology

By *Anja von der Ropp*, Legal Officer,
Global Challenges Division, WIPO



Photo: Hepia

One of the technologies available in WIPO GREEN is the vertical green biobed for the efficient degradation of pesticides and soil improvement from the University of Geneva, Switzerland.

Climate change is one of the defining challenges of our time. Extending the use of environmentally sound technologies (ESTs) is a key component in mitigating and adapting to climate change. WIPO, along with industry partners, recently launched the pilot version of a new platform known as WIPO GREEN, which seeks to accelerate the adaptation, adoption and deployment of climate-friendly technologies, particularly in developing countries and emerging economies.

CHALLENGES

Access to ESTs is a priority for many countries confronting the challenges of climate change. Efforts to promote the diffusion of these technologies, however, are often hindered by a country's capacity to absorb them. Barriers to technology diffusion are many and varied. They may be economic in nature, for example related to a country's openness to trade and foreign direct investment, or they may result from an inadequate regulatory framework in relation to environmental or intellectual property (IP) policy.

Misconceptions or a lack of knowledge about how technology transfer actually works and the role that IP plays in the process can also inhibit effective collaboration. Creating markets that support the exchange of knowledge across a broad range of stakeholders helps reduce transaction costs and thereby supports the diffusion of these technologies. IP rights play a key role in terms of attracting investors, facilitating entry into new markets and enabling effective collaborations. By injecting greater transparency into the market for ESTs, WIPO GREEN is poised to facilitate the broad global dissemination of green technologies.

HOW IS WIPO GREEN DIFFERENT?

WIPO GREEN is unique for a number of reasons. First, unlike other initiatives, it goes further than facilitating access to relevant patent information. WIPO GREEN makes it possible to offer packaged technological solutions that include complementary elements, such as the know-how and technical expertise crucial to the effective configuration of a licensed technology for a specific operating context.

Second, unlike commercial databases, there are no fees associated with its use. Third, WIPO GREEN is embedded in the United Nations (UN) system-wide response to climate change. The United Nations Framework Convention on Climate Change (UNFCCC) is calling on all parties to cooperate in promoting the development, application, transfer and diffusion of ESTs to mitigate the impact of and adapt to changing climatic conditions. To this end, at the Climate Change Conference in Cancún in 2010, the international community agreed to establish a “technology mechanism” which includes the establishment of a climate technology center and network. WIPO GREEN will be a valuable tool in supporting the work of this mechanism.

HOW IT WORKS

WIPO GREEN is designed to improve knowledge of and access to existing ESTs and to help in the search for solutions to specific climate change-related technology challenges on the one hand, and to provide additional marketing and partnership opportunities on the other hand. It achieves this by matching the available technologies, know-how and expertise of “technology providers” with the expressed needs of “technology seekers”. It is, in sum, a hub that makes it easier for would-be partners to connect with each other. The process of populating the WIPO GREEN database with the details of relevant technology providers and technology seekers is now well under way.

The idea for establishing WIPO GREEN was first floated by members of the Japan Intellectual Property Association (JIPA) which has, from the outset, along with other industry partners, played a key role in shaping its development. Industry plays a pivotal role in bringing about green innovation and fostering its broad diffusion and is, therefore, a natural partner in this endeavor.

While the mechanism is designed to facilitate the exchange and diffusion of ESTs, its role does not extend to establishing specific agreements for technology transfer. Any transactions that take place will be the subject of individually negotiated agreements between the parties concerned, allowing for greater flexibility in business decisions. Such an approach is also more suited to the multifaceted reality of the technology transfer environment.

WIPO GREEN’s built-in flexibility means it can be used by a wide range of actors operating with diverse business models. A small or medium-sized enterprise (SME) operating in a niche market but looking for new opportunities in other geographical regions, or for new partners with specific skills, will find the database useful in the same way as a university with a portfolio of promising early stage ESTs might find partners with the capacity to develop, adapt or commercialize their technologies. Larger companies with established connections can use this platform to identify new opportunities for business development. Participation is low risk, but the potential benefits in terms of new business opportunities and enhanced environmental credentials are significant.

Emerging economies have an important role to play in stimulating the WIPO GREEN marketplace, not only as technology seekers but as technology providers, because technologies from these countries are often better suited to the needs of developing countries. As technology seekers, they have access to better information about available technologies and can enhance the chances of a successful outcome by submitting a clear outline of their technology needs to the WIPO GREEN platform.

COMPLEMENTARY SERVICES

In addition to the database, users of WIPO GREEN also benefit from a range of additional services. These include:

- access to supplementary information relating to the patenting of ESTs and the technology transfer process;
- case study materials illustrating the different types of agreements arising from the many different circumstances in which technology transfer occurs;
- training on, for example, technology licensing;
- tailor-made dispute resolution procedures;
- information on possible funding sources (e.g., national governments, international organizations, foundations or philanthropic institutions, private sector entities);
- licensing tools, such as model clauses, to support licensing negotiations, which can be a complex and tricky undertaking, especially for those with little or no experience.

DEFINING “GREEN TECHNOLOGIES”

The scope of the technologies to be traded under WIPO GREEN corresponds to the definition of ESTs outlined in Chapter 34 of Agenda 21 (The United Nations Programme of Action from Rio, 1992). According to Agenda 21, “*Environmentally sound technologies protect the environment, are less polluting, use all resources in a more sustainable manner, recycle more of their wastes and products, and handle residual wastes in a more acceptable manner than the technologies for which they were substitutes.*”

“34.3 *Environmentally sound technologies are not just individual technologies, but total systems which include know-how, procedures, goods and services, and equipment as well as organizational and managerial procedures.*”

This definition deliberately encompasses a wide range of technologies in line with the recognition that the search for alternatives to fossil fuels and the broad use of renewable energy are pivotal to the process of “greening” the economy.

WIPO GREEN already contains ESTs covering a diversity of activities ranging from waste management, water purification and wastewater treatment technologies, to energy management, alternative energy production and transportation.

THE WAY FORWARD

With the planned launch of the fully-fledged platform later this year, the process of finalizing and fine-tuning its modalities and services is well under way. WIPO GREEN’s impact in terms of supporting the exchange and broad dissemination of ESTs hinges in large part on the active participation of stakeholders. The greater the number of users, the greater the chances of successfully matching technology providers with technology seekers to resolve environmental challenges. WIPO GREEN offers an opportunity to translate environmental rhetoric into reality and to make a real difference. ♦

The Japan Intellectual Property Association (JIPA) has played a key role in the conceptualization and development of WIPO GREEN. Mr. Y. Kawamura (General Manager, Intellectual Property Division, Honda Motor Co., Ltd.), who led the JIPA project team, explains why the Association has been such an active force in the development of WIPO GREEN.

What triggered the idea of a database for ESTs?

At JIPA, we believe that the IP system is there to foster the development and dissemination of technology. Amid the persistent misunderstandings about the role of IP expressed in various high-level international climate change discussions, we decided to take action to demonstrate how IP can make a difference. If developing countries wanted green technologies, why not create a mechanism to move green technologies around the world?

Why did you approach WIPO?

We believe that WIPO is ideally placed to manage the WIPO GREEN initiative. As a UN specialized agency dedicated to promoting, protecting and developing IP systems worldwide, it is a neutral forum that has strong links with both developed and developing countries. Its global reach, coupled with its IP expertise make it a perfect home for this initiative. Personally, I cannot think of anyone else with whom to work in building this platform.

What do you expect from WIPO GREEN?

WIPO GREEN is a simple database system designed to create matchmaking opportunities among people interested in green technology transfer. It looks simple and is as yet not fully developed, but with strong support from stakeholders – including UN agencies, investment banks, international banks, governments, the private sector, consultants, academia, SMEs and individuals – WIPO GREEN can become a global platform for technology transfer.

To really get the ball rolling, we need people to understand how WIPO GREEN works. We also need people to use WIPO GREEN and to populate it with information about their technologies and their specific needs. Not only does WIPO GREEN offer a practical way forward in tackling climate change, it will also help strengthen and expand technology networks. It may take some time, but I am confident that the efforts of WIPO and JIPA will pay off in the long run.

MAPPING DESALINATION TECHNOLOGIES

Access to clean water is a basic human need and essential for social and economic development. In a global context of population growth, urbanization, and climate change, effective water resource management is becoming a key political priority. Many countries around the world are facing the challenge of making more fresh water available for domestic, agricultural, industrial and environmental uses.

Desalination – whereby salts and other minerals are removed from seawater and brackish water – will play an increasingly critical role in addressing the long-term water needs of many communities, especially in coastal areas. The high energy costs associated with powering legacy desalination plants, however, mean these technologies are often beyond the means of many developing countries. Using renewable energy technologies to power these plants, could provide a more affordable (and environmentally sound) source of fresh water.

Patent landscape reports offer a useful way to visualize and make sense of who is doing what in the area of desalination, especially in relation to renewable energy-powered systems. WIPO recently teamed up with the International Renewable Energy Agency (IRENA) and the Global Institute for Water, Environment and Health (GIWEH) to map these technologies. Using the desalination technology sector as an example, this article considers the types of data and analysis patent landscape reports can generate and how they can provide many useful insights into, and support the development of, more effective innovation policies and patenting strategies.

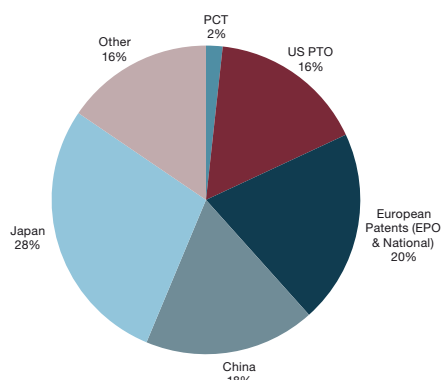
PATENTS: A TECHNOLOGICAL GOLDMINE

Patents are an extremely valuable source of technical information. In 2010, an estimated 7.3 million patents were in force worldwide. These, coupled with the record 1.98 million patent applications filed in the same year, represent a global technology library – a goldmine of technical data. As part of the patent-granting process, applicants must describe how their inventions work. These descriptions are eventually published and made freely available to the public. This is one of the most important aspects of the patent system. Patent documents also contain legal and business information, such as the inventor's name and address, and the application date, which can be invaluable in identifying technology partners and determining a company's freedom to operate.

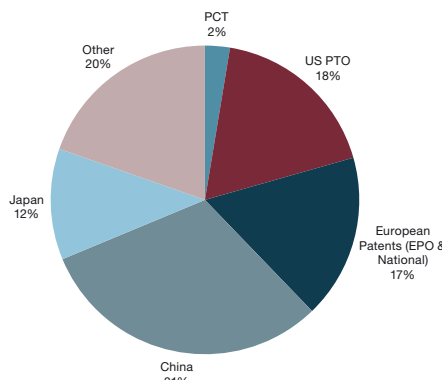
MAPPING THE PATENT LANDSCAPE

The increasing availability of patent data through searchable online databases is fueling interest in PLRs in order to analyze technology trends, understand development hot spots, identify key suppliers and partners for further technology development and improve patenting, R&D and investment strategies. By analyzing the information in the relevant aggregated patent documentation – both patents granted and

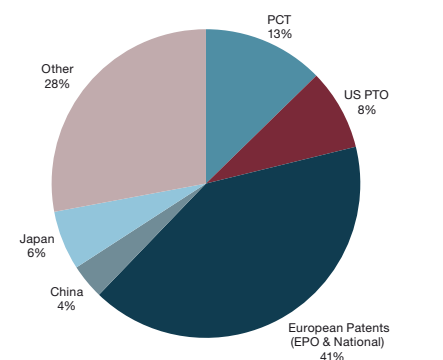
**Desalination overall:
Office of first filing**



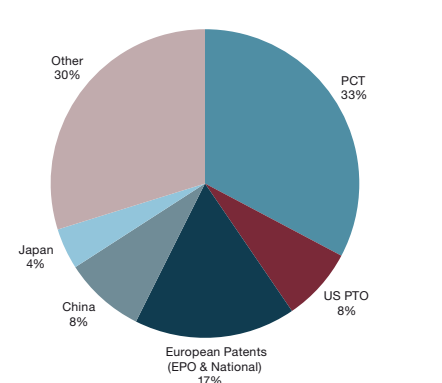
**Desalination overall:
Office of first filing – last 5 years**



**Desalination overall:
Office of second filing**



**Desalination overall:
Office of second filing – last 5 years**



Analysis of patent filings by geography for desalination: office of first filing (usually where an invention is being developed) and office of second filing (the most important geographical areas of patent protection).

Uses of Patent Landscape Reports

Patent landscaping is useful for:

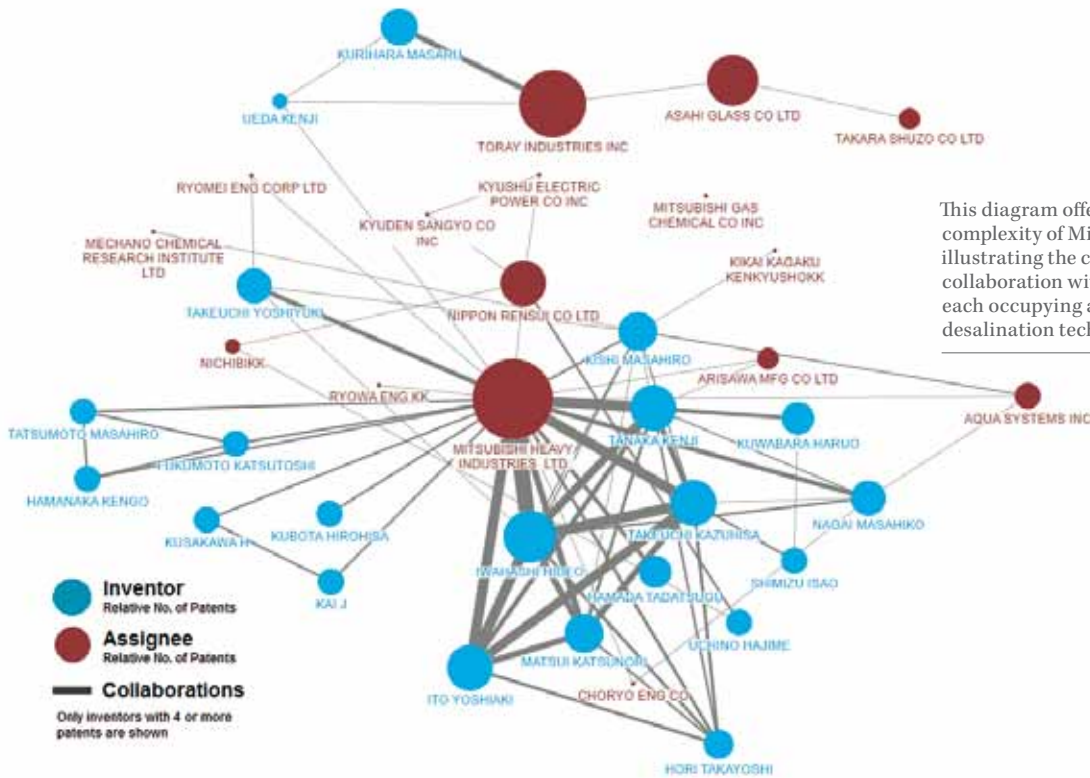
- developing IP strategies and identifying innovation opportunities;
- identifying emerging technologies, trends and markets;
- understanding the activities of competitors;
- improving targeting of investment, innovation and industrial policies and impact assessment;
- identifying potential collaborators, and knowledge flows within industries and across countries, and facilitating technology transfer decisions.

patent applications – and in some cases combining it with non-patent data, such as market analysis, it is possible to acquire a better understanding of the dynamics of innovation in a given technology sector. Patent landscape reports thus filter and make sense of raw patent data to provide a snapshot of technological innovation in a particular industry.

Patent landscaping involves the development of a relevant patent dataset, specific to a particular technology space, application or problem. The dataset is created by searching patent documents – both patent applications and granted patents – using a range of tools.

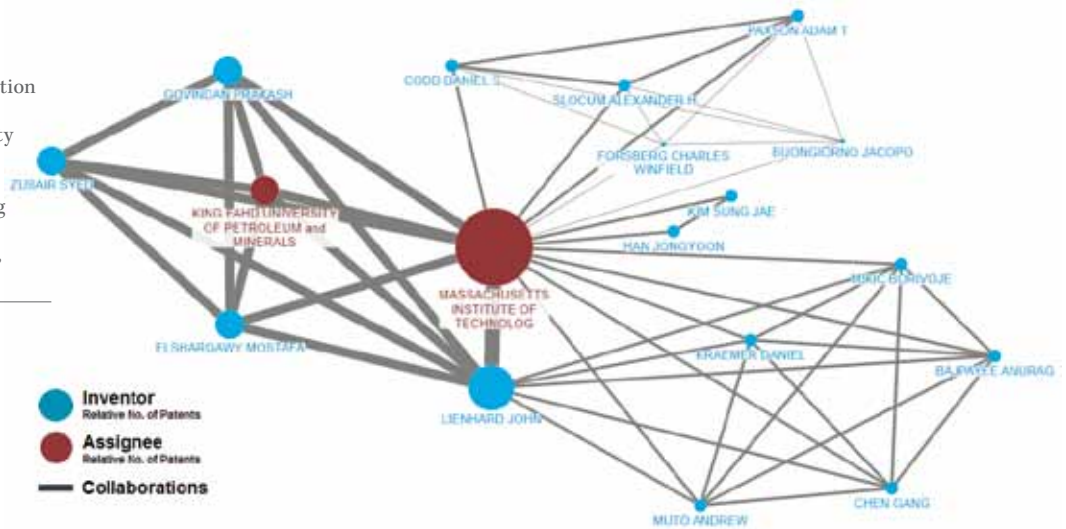
The *Patent Landscape Report on Desalination Technologies and the Use of Alternative Energies for Desalination* (WIPO Publication No. 948/2E) provides an overview of patenting activity in relation to desalination technologies, with a special focus on those powered by renewable energies. The report aims to support policymakers in identifying and assessing cost-effective alternatives to existing fossil-fuelled desalination systems and in highlighting feasible options for use in regions rich in renewable energy sources but where no desalination infrastructure yet exists. As such, it seeks to promote technology transfer to developing countries and accelerated uptake of renewable energy.

The PLR on desalination identifies key technologies, including those at the research, development, pilot and commercial stages of development. It identifies opportunities for innovation such as the need to lower energy costs, reduce CO₂ emissions and improve brine output management. Innovation – for example, relating to mobile and modular desalination systems integrated with renewable energy – can help reduce the high up-front cost of deploying desalination plants, making it possible for operators to add capacity as required. The development of low-cost components including



This diagram offers a partial view of the complexity of Mitsubishi's inventor network, illustrating the company's intensive collaboration with a number of partners, each occupying a different part of the desalination technology value chain.

This diagram shows that there is collaboration between the Massachusetts Institute of Technology (MIT) and King Fahd University of Petroleum and Minerals (Saudi Arabia) through one research cluster. There are also other distinct clusters at MIT working on desalination technology, although two of these are linked through John Lienhard, professor of mechanical engineering.



About Patent Families

Patent documents are geographically specific – patents have a legal effect only in the country in which protection is sought – while technologies can flow across countries. An inventor will usually file an initial patent application in a single country – normally the country in which the invention is developed – and protect the technology through the filing of subsequent patent applications in other jurisdictions. In this way, an applicant may end up having multiple patents – constituting the simplest form of a patent family – to protect the same technology. Analysis of these families makes it possible to better understand a company's patent strategy in different regions.

The WIPO Patent Landscape Reports Project

In the context of the its Development Agenda and in collaboration with a number of international partners, WIPO is preparing a range of patent landscape reports that highlight the essential technologies, processes and methods required to meet the basic development needs of developing and least developed countries (LDCs). The reports, which vary in scope, cover technologies relating to public health, food and agriculture and climate change and the environment. Six reports have been completed and another three are under way (www.wipo.int/patentlandscape/en/programs/patent_landscapes/ongoing_work.html).



membranes or energy recovery devices can help reduce operating costs and improve efficiency, thus making investment in desalination infrastructure a more feasible and attractive option. In many instances, when new technologies come to market, the key barrier to entry is related more to competitive pricing than to technical feasibility.

Innovation in the field of desalination has intensified in the past 30 years. Increased interest in the use of renewable energy, better understanding of the environmental impact of desalination technologies and a growing market for these technologies are just some of the factors that account for this.

The report identifies 921 patent families related to direct desalination-renewable energy integration, representing some 20 percent of the desalination dataset as a whole. The largest number of such patents relate to solar thermal technology, with wind energy integration demonstrating higher growth rates than either wave or tidal energy integration. One quarter of the 4,551 desalination technology patent families identified and 31 percent of those relating to desalination-renewable energy integration have originated during the last five years, reflecting the growing imperative to find greener, more cost-effective desalination solutions.

KEY PLAYERS

The report highlights the dominance of Japanese companies in the desalination technology space over the last 20 years, despite a marked overall decline in Japanese desalination patenting activity over the last five years. Mitsubishi Heavy Industries (Japan) holds the most patent families reflecting its major role in the construction of large desalination plants, such as the reverse osmosis (RO) desalination plant in Madina-Yanbu (Saudi Arabia) (8,530 m³/day) and the world's first three-stage RO plant in Rabigh on the Red Sea (Saudi Arabia) with a capacity of 192,000 m³/day. It also holds patents in the solar thermal/waste heat space, most of which date from the 1970s and 1980s. General Electric (United States), the University of Tianjin (China) and Germany's Siemens AG are relatively new players with the majority of their patent families originating during the last five years. Interestingly, two individual inventors from the Republic of Korea (ROK) – Suh Hee Dong and Lee Sang Ha – are also active in this technology area.

GEOGRAPHICAL ANALYSIS

A breakdown of the offices in which a patent application is first and subsequently more widely filed offers some interesting insights. The so-called office of first filing (OFF) is located in the country in which an invention is typically being developed and patent protection is initially sought, while the offices of second filing (OSF) reflect those countries in which patent protection is subsequently sought.

Data for the last 20 years show that Japan, followed by patent offices in Europe, the US and China were the most popular OFFs. A very different picture emerges for the last five years, however, with the Chinese patent office topping the list having almost doubled its share of desalination technology patents, followed by offices in the US, Europe and Japan. China is clearly

becoming an important industry player with considerable and above-trend growth in desalination patenting.

Africa, the Middle East and Asia are of particular policy interest in that they cover a large number of LDCs and offer high potential for the deployment of desalination technologies. Moreover, while desalination plants exist in the Middle East, many of these are fossil-fuelled legacy systems. Patenting activity in Africa and the Middle East is marginal compared to North America, Europe and Asia. In Africa patents have been filed only in South Africa, Morocco and Egypt in the last five years. In the Middle East, over 90 percent of all desalination-related patents have been filed in Israel.

TREND ANALYSIS

The report reveals a general decline in desalination patenting activity in Japan. The number of desalination-renewable energy integration-related patents varies according to technology. For solar photovoltaic (PV) energy integration, for example, European offices are popular OFF destinations accounting for over 50 percent of applications although this has decreased slightly to 43 percent over the past five years. The US and China, conversely, have increased their shares of such filings, alongside a considerable decrease in Japan. A similar pattern occurs in relation to wind energy integration. For wave and tidal energy integration, the US and Europe are the most popular OFFs, with Europe's share slightly decreasing over the last five years along with Japan's. China, however, is an increasingly popular OFF. In the area of geothermal energy integration, the US, China and Europe are the only OFFs, with the US losing a large share of this activity to China in the last five years. With the exception of Israel, there is no such patenting activity in the Middle East and North Africa (MENA) region in spite of acute water insecurity and an abundance of renewable energy sources to fuel desalination technologies.

MAPPING KNOWLEDGE FLOWS

While patents are a strong indicator of technological progress and innovation, they do not provide a complete picture. It may take years for a patented technology to be commercialized, if it ever is. Many products are protected by multiple patents, or involve third party technology that may (or may not) be protected by patents or other IP rights. Patent holders differ significantly in their capacity or wish to commercialize a patented product.

A patent landscape report can support the commercialization process by making it possible to analyze relevant patent data in various ways, for example, by using a patent-based inventor network diagram, to identify research clusters and visualize knowledge flows within and across companies. In some instances, complementary market analysis is the only way to identify active players, especially if their commercial offering integrates technologies patented by third parties.

Patent landscaping filters and makes sense of raw patent data offering a useful snapshot of innovation in a given technology sector. The valuable insights this generates can support policymakers and the business community in optimizing their innovation strategies. ♦

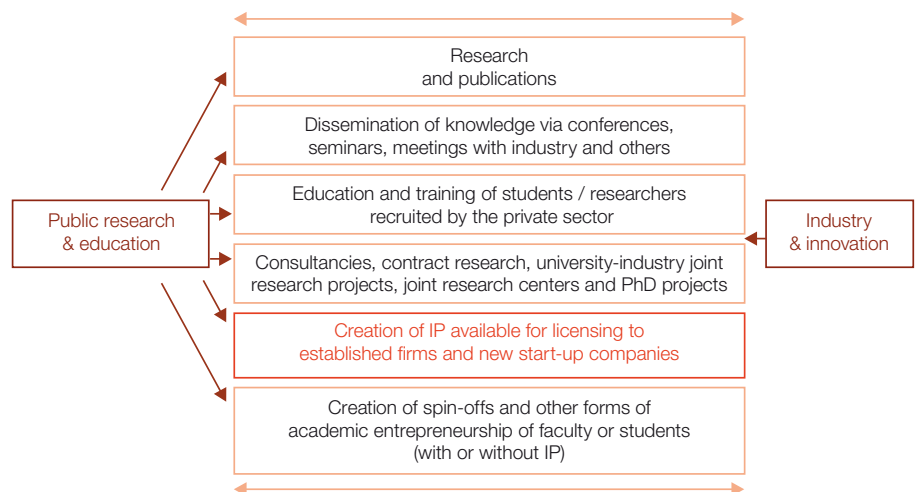
HARNESSING the benefits of publicly-funded research

Over the last 30 years, high-income economies have sought to maximize the benefits of publicly-funded research to accelerate knowledge transfer and entrepreneurship and to fuel innovation and economic growth. As a consequence, universities and public research organizations (PROs) in these countries are becoming more strongly business-focused. In light of the perceived benefits of strengthening university-industry links, particularly in terms of stimulating innovation and promoting technology transfer, many middle and low-income economies are adopting similar approaches. This is causing analysts to look more closely at these policies. Can they be readily exported from one setting to another? Is university patenting an efficient driver of business innovation? What is the impact of such policies in terms of economic growth and knowledge generation? WIPO Magazine’s third article in the Innovation Trends series takes a closer look at the evolving landscape and considers the merits of more active use of the intellectual property (IP) system by universities and PROs in middle and lower-income settings.

EVOLVING POLICY FRAMEWORKS

Public-private knowledge transfer occurs through a large number of formal channels (including research collaboration, licensing university inventions, joint ventures, and hiring university students and researchers) and informal channels (including publications and conferences). IP can also play a key role in terms of fuelling innovation and driving business development through, for example, incubators, science parks and university spin-offs.

There has been a marked trend over the past three decades in high-income economies – also more recently, in selected middle and low-income economies – toward institutional ownership and commercialization of university and PRO inventions. Policy frameworks and practices are constantly evolving in both more and less developed countries giving rise to a broadly diverse range of legal and policy approaches for maximizing returns on publicly-funded research.



by **Pluvia Zuniga**, UNU Maastricht Economics and Social Research Institute on Innovation and Technology and **Sacha Wunsch-Vincent**, Senior Economic Officer, Economics & Statistics Division, WIPO



Specific rules defining the scope of university patenting, invention disclosure and incentives for researchers (such as royalty sharing) also vary. One clear message that emerges from this web of policy and practice is that changes to the legal framework alone are not sufficient to trigger sustained patenting by research institutes anywhere. In the US, for example, university patenting is being driven not only by a favorable legal environment, but also by expanding technological opportunities in the biomedical and other high-tech fields.

PATENT FILINGS BY UNIVERSITIES AND PUBLIC RESEARCH ORGANIZATIONS INCREASING

In the absence of comprehensive data on formal and informal university-industry relationships, data on patents and licenses offer useful insights into the scale of university knowledge transfer and research performance. Since 1979, the number of international patent applications filed under the Patent Cooperation Treaty (PCT) by universities and PROs has increased steadily by 5 percent and 29 percent respectively (see Figure 1), outpacing the overall rate of growth in PCT applications.

This growth has been driven largely by high-income economies, among which France, Germany, Japan, the UK and the US represent approximately 72 percent of all university and PRO PCT applications.

Data for the period 1980-2010 show that patenting by universities and PROs is highly concentrated and confined to the science-driven biomedical and pharmaceutical sectors. Universities and PROs in the US filed 52,303 and 12,698 international applications respectively. PROs in France filed the second largest number of international applications with 9,068, followed by Japan with 6,850. Among middle-income countries, Chinese universities led the way with 2,348 international applications followed by Brazil, India and South Africa. China and India together accounted for 78 percent of all international applications filed by PROs from middle-income economies.

LICENSING BY UNIVERSITY AND PUBLIC RESEARCH ORGANIZATIONS GROWING BUT FROM LOW LEVELS

Licensing activity – the number of agreements concluded and revenues generated – is a good indicator of university technology transfer. While sparse, data for high-income economies support the view that university and PRO licenses and related income are growing, albeit from low levels. Outside the US, however, licensing activity is modest compared to the number of patent applications filed by PROs, income derived from research and development (R&D) contracts, and consulting or R&D expenditure. Licensing-derived revenue is largely driven by a few institutions operating in the pharmaceutical, biomedical and software sectors. In middle and low-income countries, IP commercialization is limited to just a few patenting institutions. Other forms of IP (e.g. copyright, trade secrets) and know-how are more commonly used to transfer knowledge to businesses in these settings.

IMPACTS AND CHALLENGES

The jury is still out on the economic impacts of IP-based technology transfer laws and practices.

Some experts favor encouraging universities and PROs to patent inventions arguing that it enables them to “reveal their inventions”, encourages follow-on innovation and helps create a market for such inventions. The rationale is that university inventions often need further development to be useful, and firms are unlikely to invest in further development without an exclusive license.

Others argue that patents can slow the diffusion of these university inventions (through the exclusive licensing of patents to a single firm) and can stifle innovation and technology transfer by limiting the diversity of research and by negatively impacting other informal channels for knowledge exchange.

The possible benefits and costs to firms, universities and PROs, as well as the broader systemic impacts on science, the economy and society, are outlined in Table 1.

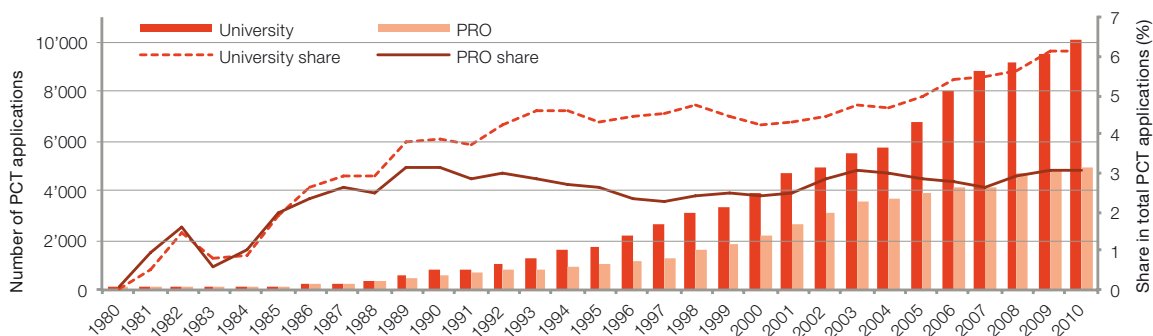


Figure 1: Universities’ and PROs’ patents are increasing under the PCT. PCT applications from PROs and universities worldwide, absolute numbers (left) and as a percentage of total PCT applications (right), 1980-2010

Source: WIPO Statistics Database.

Table 1: Systemic impacts of IP-based technology transfer policies

	POTENTIAL BENEFITS	POTENTIAL COSTS (OR INVESTMENTS)
UNIVERSITIES & PROS	<p>1) Increased IP ownership facilitates entrepreneurship and economic specialization</p> <ul style="list-style-type: none"> Reinforces academic entrepreneurship (e.g., fosters clusters, incubators, spin-offs, etc.) Generates additional revenue for research <p>2) Faculty-industry cross-fertilization</p> <ul style="list-style-type: none"> Intangible benefits (e.g., reputation, better quality research) More relevant research projects with scientific and commercial purpose <p>3) Increased student intake and ability to place students in firms</p>	<p>1) Diversion of time away from academic research</p> <ul style="list-style-type: none"> Distorts academic incentives and the nature of public institutions Academia adopts a stronger commercial orientation <p>2) IP-related costs & resource requirements associated with</p> <ul style="list-style-type: none"> Establishing and maintaining a technology transfer office (TTO) and related IP management and defense of IP rights
FIRMS	<p>1) Easy access to useful university inventions</p> <ul style="list-style-type: none"> Firms can collaborate with top scientists and develop innovations within a contractual framework <p>2) The creation of a market for ideas</p> <ul style="list-style-type: none"> Transaction costs diminish and legal certainty increases, making for a more attractive investment environment Securing an exclusive license increases incentives for further investment Ability to specialize offers a competitive advantage <p>3) Commercialization of new products generating profits and growth</p>	<p>1) Blocked access to university inventions</p> <ul style="list-style-type: none"> Precludes free access to university inventions, including the more basic research fields and research tools, unless an exclusive license or contract is secured. <p>2) Increased transaction costs and tensions in industry-university relationships</p> <ul style="list-style-type: none"> Academics' poor understanding of development costs and market needs leads to a higher probability of bargaining breakdown IP negotiations can complicate the establishment of joint R&D and university-industry relations, where universities aim to retain the title to their IP and maximize associated revenue
	POTENTIAL BENEFITS	POTENTIAL COSTS
BROADER IMPACTS ON SCIENCE	<p>1) Increased impact of more focused and relevant applied research</p> <p>2) Improved innovation system linkages</p> <ul style="list-style-type: none"> Efficient division of labor in the generation and commercialization of new inventions Private sector contribution to funding basic and applied research <p>3) Improvement in the quality of research and education</p>	<p>1) Reorientation of research</p> <ul style="list-style-type: none"> Overemphasis on applied, short-term, commercial research Less diversity or research resulting from greater focus on patentable outcomes Other university missions, such as teaching and training, are neglected <p>2) Negative impacts on open science</p> <ul style="list-style-type: none"> Crowds out the use of other knowledge transfer channels to industry Publication delays, increased secrecy, less sharing, including the withholding of data Decrease in international scientific exchanges <p>3) The promise of university income can reduce government commitment to funding</p>
INNOVATION AND GROWTH	<p>1) Commercialization of inventions with economic and social impacts</p> <ul style="list-style-type: none"> Increase in consumer welfare and business productivity via access to innovative products and processes <p>2) (Localized) positive impacts on R&D, technology spillovers, entrepreneurship, employment and growth</p> <p>3) Higher competitive position of country in the global market</p>	<p>1) Long-run negative effect as attention is diverted away from academic knowledge production</p> <p>2) Long-run negative effects of IP on open science and follow-on innovation</p> <ul style="list-style-type: none"> Patenting of broad upstream inventions, platform technologies and research tools increases the cost of follow-on research and innovation Reduction in the diversity of research <p>3) Focus on IP might inhibit rather than promote commercialization of inventions</p>

EXPERIENCE OF HIGH-INCOME COUNTRIES

Research relating to the experiences of high-income economies confirms that university and PRO patenting and efficient technology transfer policies and institutions are an important precondition for increasing opportunities to commercialize university inventions. Access to early-stage research is critical to firms, in particular in the science-intensive sectors. Closer university-industry linkages have also proven effective in fostering research into more socially relevant outputs.

Studies show that university patenting and licensing have underpinned the emergence of new industries (e.g., the scientific instruments industry, semiconductors, computer software and biotechnology industries), as well as the creation of high-technology clusters. It is, however, difficult to demonstrate with any certainty the contribution that commercialization of university IP makes to economic development. Constructing data that effectively capture other dimensions of the impacts of IP-based technology transfer – for example, productivity gains of downstream firms using or building on such IP, or a consumer surplus from resulting innovation – remains a challenge.

On top of this, there are no clear signals as to the most adequate IP ownership model for universities. For example, it is not clear whether the university-ownership model is superior to one in which faculty retains ownership of inventions, or one in which the individual scientists retain IP rights. It is equally challenging to identify the long-term implications of university patenting for other knowledge transfer channels and more globally for the broader science system.

CHALLENGES FACING LOW AND MIDDLE-INCOME ECONOMIES

Low and middle-income countries vary substantially with regard to the R&D capacity of PROs, infrastructure and policy frameworks for technology transfer and science-industry cooperation.

Innovation systems in these economies are characterized by a lower level of science and technology activity (S&T); a greater share of publicly-funded R&D with less relevant outputs; and limited science-industry linkages. This can be attributed to the low absorptive capacity of firms, combined with an ensuing lack of “business” demand for science and technology, as well as a range of other constraints relating to entrepreneurship and access to financing for innovation.

Technology transfer policies unaccompanied by policies seeking to strengthen both the R&D capabilities of firms and industry-science linkages are unlikely to be successful. Broader institutional reforms are also needed, for example, to enhance the autonomy of universities and ease regulations governing the terms of employment of scientists so as to encourage more proactive participation in technology transfer activities.

Policymakers in middle and low-income economies face low levels of awareness within universities and few incentives encouraging participation in IP-related technology transfer. Few universities and PROs have clear technology transfer policies, and efforts to strengthen university-industry linkages are further hamstrung by inadequate resources and skills shortages. However, these characteristics are not shared equally across all middle and low-income countries. In general, work is ongoing to improve the systemic weaknesses in national innovation systems to give increased autonomy to universities. Many are in the midst of setting up technology transfer policies and practices, some of which are already having a significant impact. For example, Brazil and Mexico have enacted explicit regulations regarding IP ownership and university technology transfer. In India, institutional policies have recently been developed at key national academic and research organizations. While Nigeria and Ghana do not have specific legislation relating to university patenting, both are in the process of establishing technology transfer offices within institutions of higher education.

There is growing evidence that IP-based technology transfer policies and institutions are instrumental in increasing opportunities for commercializing university inventions and in securing university-industry synergies. Amid the broadly diverse national policies being adopted to maximize the impact of publicly-funded research, however, there is, as yet, no clear blueprint for success. The ongoing experiences of both high-income and selected middle and low-income economies in this area, will, no doubt, offer important and useful insights to all those involved in crafting and implementing optimal innovation systems for the future. ♦

SINGAPORE SEES ROLE AS AN ASIAN IP HUB

Singapore's Minister of Law, Mr. K. Shanmugam, recently announced plans to develop Singapore into an intellectual property (IP) hub for Asia that will service the potential growth in demand for IP services in the region.

The task of developing the IP Hub Master Plan that will guide this initiative falls to the IP Steering Group chaired by Mr. Teo Ming Kian, Chairman of MediaCorp Pte Ltd. "Singapore is in a strong position to be developed into an Asian IP hub, given its legal and financial services infrastructure, and robust IP regime," Mr. Teo Ming Kian said. The growth of our IP service industry could further accelerate our transition to a knowledge-based, innovation-driven economy, and create high-value job opportunities in Singapore. Companies and inventors in Singapore and the region will have greater access to a wider network of global IP service providers which, in turn, could draw in more service providers and encourage more inventions and innovation." The Steering Committee aims to finalize and submit its recommendations to the government in mid 2012.

PAKISTAN LAUNCHES SMES INITIATIVE

An initiative to support small and medium-sized enterprises (SMEs) in their use of the IP system was launched in April 2012 by the Intellectual Property Office of Pakistan (IPO-Pakistan) and the Small and Medium Enterprises Development Authority, SMEDA, according to a report in *The Baluchistan Times*. The initiative involves the establishment in key centers around the country of a number of IP "Facilitation Desks", to provide companies with the facilities and information required to protect their IP. The Director General of IPO-Pakistan said that promoting greater use of IP among SMEs was a core objective of IPO-Pakistan's public outreach program. SMEDA's CEO, Mr. Yousuf Naseem Khokhar, noted that SMEs, which accounted for over 90 percent of the country's business activity, play a vital role in Pakistan's economic development.



Photo: INTA

INTA UNVEILS ANTI-COUNTERFEITING CAMPAIGN

In May 2012, the International Trademark Association (INTA), which brings together major fashion and consumer product brands, unveiled its Unreal campaign to educate teens about the value of trademarks and the negative effects of counterfeiting.

The awareness initiative is being rolled out using social media platforms including Facebook (www.facebook.com/unreal-campaign), traditional media platforms and special events such as high school visits. It also includes a series of video clips on YouTube in which teens share real-life experiences of how buying counterfeit products has affected them. The campaign will initially focus on the US, but will expand to other countries in the future.

INTA's initial research on how young people perceive counterfeiting indicates that, while they are conscious of the availability of fake goods and have a keen awareness of branded products, they are unaware of the potential harm that counterfeiting can cause.

INTA's Executive Director, Alan C. Drewsen, explains, "we see the Unreal campaign not only as a way to educate teens about counterfeiting, but also about the value of intellectual property and the important role that trademarks play in our daily lives and the economy." He said, "Teens' purchasing power will only increase over time, and they will soon be the next generation of consumers. With that in mind, we see a tremendous opportunity for INTA to arm teens with as much information about the economic, social and health risks involved with counterfeiting as possible. It is our hope that this information will influence their decision the next time they are approached by a site or vendor selling counterfeit goods."



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