

THE ICC INTELLECTUAL PROPERTY ROADMAP



Current and emerging issues
for business and policymakers

13th Edition 2017

THE ICC INTELLECTUAL PROPERTY ROADMAP



Current and emerging issues
for business and policymakers

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Notes

Preface

The three years since the 2014 edition of the ICC Intellectual Property Roadmap have seen many new developments which have had an impact on the world of intellectual property (IP).

The United Nations adopted the 2030 Agenda for Sustainable Development, with 17 Sustainable Development Goals aiming not only to end poverty, but also to address social needs and environmental challenges. The 2016 Paris Agreement, under the United Nations Framework Convention on Climate Change, marked a new direction in international climate policies. Both these multilateral frameworks established new approaches for managing the future of our planet in which innovation – and by extension, intellectual property – will play an important role.

The newest international intellectual property treaty, the Marrakesh Treaty for the Visually Impaired, entered into force last year. At the plurilateral level, the Trans-Pacific Partnership – which includes extensive intellectual property provisions – was agreed, though its future remains uncertain after the withdrawal of the US.

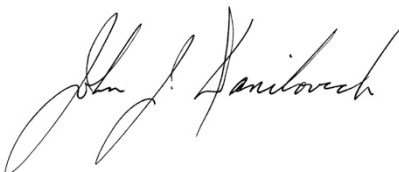
Digitisation has continued to spawn new processes and technologies with consequences both for the management of IP assets and the enforcement of IP rights. The increasingly data-driven nature of the economy has also raised questions about rights and responsibilities over data.

The critical need to improve trade secrets protection resulted in the recent adoption of important new legislation in the EU and the US. Other areas of intellectual property also saw notable developments through case law and legislation, while an ICC report noted the trend for an increasing number of countries to establish specialised jurisdictions to resolve intellectual property disputes.

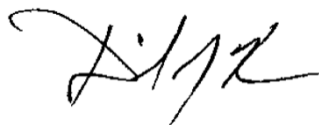
The 2017 edition of the ICC Intellectual Property Roadmap reflects all these and more changes in a substantially updated overview of key intellectual property policy issues. Sections on valuation and monetisation of IP assets, patents and standards, designs, trademark restrictions on packaging, domain names, plant varieties, information products, sustainable development, climate change, innovation and competition, as well as the chapter on developments having an impact on IP, have been largely rewritten, while important new information has been added to other sections.

We would like to thank the members of the task force who contributed to the development of this new edition and in particular its Chair, Ingrid Baele.

We hope that the ICC IP Roadmap will continue to be a useful reference tool for all those who work in – or need to understand – intellectual property policy, and welcome feedback from readers so that we can continue to improve this publication.



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Secretary General
ICC



David Koris
Chair
ICC Commission on Intellectual Property

This is the thirteenth edition of “The ICC Intellectual Property Roadmap: Current and Emerging Issues for Business and Policymakers”, which is produced by the ICC Commission on Intellectual Property and was first issued in 2000. The ICC IP Roadmap draws upon existing ICC positions and is not intended to create new ICC policy. It can be accessed at iccwbo.org/iproadmap in English and other languages, together with the ICC policy papers cited.

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Intellectual property basics

What is intellectual property?

Intellectual property (IP) is a creation of the intellect that is owned by an individual or an organisation in the private or public sector which can then choose to share it freely or to control its use in certain ways. IP is found almost everywhere – in creative works like books, films, records, music, art and software, and in everyday objects like cars, computers, drugs and varieties of plants, all of which have been developed thanks to advances in science and technology. The distinctive features that help us choose the products we buy, like brand names and designs, can also fall within the scope of IP.

Even the place of origin of a product can have rights attached to it, as is the case with Champagne and Gorgonzola. Much of what we see and use on the Internet, be it a web page or a domain name, also includes or represents some form of IP.

Why is intellectual property protected and who benefits?

Through a system of intellectual property (IP) rights, it is possible not only to ensure that an innovation or creation is attributed to its creator or producer, but also to secure ownership of it and benefit as a result. By protecting IP, society acknowledges the benefits it contributes and provides an incentive for people to invest time and resources to foster innovation and expand knowledge.

The IP system is designed to benefit society as a whole, striking a delicate balance to ensure that the needs of both the creator and the user are satisfied. IP rights usually allow the rightsholder to exercise rights over the use of his or her work for a limited period of time. In return for granting such rights, the IP system contributes to society in a number of ways, for example, by:

- enriching the pool of public knowledge and culture
- maintaining fair competition and encouraging the production of a wide range of quality goods and services
- underpinning economic growth and employment
- sustaining innovation and creation
- promoting technological and cultural advances and expression.

Where suitable or sufficient IP rights are not available, or are difficult to enforce, innovators and innovative enterprises may need to rely to a greater extent on other means to protect themselves from unfair competition, such as through secrecy, contractual agreements or technical means of preventing copying. Such means can be less effective in promoting the goals set out above.

How is intellectual property protected?

Intellectual property (IP) rights are granted under the national laws of each country or region. In addition, various international agreements on IP rights harmonise laws and procedures, or allow IP rights to be registered at the same time in several countries. These rights can be sold, licensed or otherwise disposed of by the rightsholder. Different types of intellectual property – literary and artistic creations, inventions, brand names and designs, to name a few – are protected in different ways:

- Creations in the fields of literature and the arts, such as books, paintings, films, musical compositions and recordings, as well as software, are generally protected through copyright or so-called related rights.
- Technological inventions are typically protected by patents.
- Distinctive features – such as words, symbols, smells, sounds, colours and shapes – that distinguish one product or service from another, can be protected by trademark rights.
- The specific external appearance given to objects, such as furniture, car body parts, tableware or jewellery, may enjoy design protection.
- Geographical indications and trade secrets are also considered to be types of intellectual property and most countries provide some form of legal protection for them.
- Rules to prevent unfair competition in the commercial world also help protect trade secrets and other types of IP.
- Plant varieties are protected mainly by a specific IP protection regime called plant variety rights, but may also be protected by patents or by a combination of the two systems.
- Specific legal protection is provided in some countries for integrated circuits and databases.

The same product can also be simultaneously protected by more than one type of IP right in different countries.

Copyright

Copyright exists to encourage the production of original artistic, literary and musical creations, from books and paintings to movies, recordings and software. The copyright system rewards artistic expression by allowing the creator to benefit commercially from his work. In addition to granting economic rights, copyright also bestows moral rights, which allow the creator to claim authorship and prevent mutilation or deformation of his work that might harm his reputation.

To qualify for copyright protection, the work has to be an original creation and expressed in a certain fixed form. Copyright is automatically vested in the author once the work is created, though a few countries maintain voluntary registration systems that provide additional benefits. It can then be licensed or assigned, often to a publisher or a producer. Copyright protection gives an author exclusive rights of a certain duration, generally from the time of creation of the work until 50 or 70 years after the author's death or, for sound recordings, often 70 years or more after publication.

Copyright law allows the copyright holder to control certain uses of his work. These uses, which the author can authorise or prohibit, typically include reproducing, distributing, making available, renting, recording, communication to the public, broadcasting and translating or adapting the work. In some countries, the author does not have the right to prevent certain uses of his or her works but still has a right to be remunerated for such uses. In every country, exceptions exist that allow the public to make certain uses of works without either remunerating or obtaining the authorisation of the author. An example of this could be the use of limited quotations for illustration or teaching. The protections afforded to the copyright holder, as well as limitations and exceptions provided under copyright law, are an essential part of copyright frameworks. By striking the right balance, together they facilitate the creation of artistic works as well as new means to distribute and enjoy artistic works.

Most countries provide similar protection for phonogram producers, performers and broadcasters. In some countries, performers, producers and broadcasters of copyrighted works are protected by copyright just like authors; in other countries, they are instead protected by so-called neighbouring or related rights. Copyright has become increasingly important with the development of digital technology and the Internet, where it is a major form of intellectual property (IP) protection for content distributed online, and where it faces difficult enforcement issues.

Several international agreements on copyright protection and related rights exist. These include the Berne Convention for the Protection of Literary and Artistic Works (1886), the Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations (1961), the Geneva Convention for the Protection of Producers of Phonograms against Unauthorized Duplication of their Phonograms (1971), the WIPO¹ Copyright Treaty (1996) and the WIPO Performances and Phonograms Treaty (1996) – both of which address the protection of authors' and music producers' and performers' rights in the digital world –and more recently the Beijing Treaty on Audiovisual Performances (2012) and the Marrakesh Treaty to Facilitate Access to Published Works for Persons who are Blind, Visually Impaired or otherwise Print Disabled (2013). The World Trade Organization (WTO) Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) (1994) is the first multilateral trade-related IP agreement. It covers most types of intellectual property and includes copyright and related rights.

Patents

A patent is a governmental authorisation which gives the inventor the right, for a specified period of time, to prevent others from using, making, selling, offering for sale or importing his invention without his authorisation, i.e., it is a prohibitive right, not a positive right to use. In return, the inventor must disclose the details of his invention in a patent document that is made publicly available. In essence, patents represent a social contract between society as a whole and inventors.

An innovation that the inventor prefers to keep secret is known as know-how or a trade secret and protected under other laws.

In most countries, patent protection lasts for 20 years counted from the filing date and is issued by national or regional government patent offices, to which the inventor has to submit an application.

¹ World Intellectual Property Organization.

In order to be granted the patent, the invention must fulfil three conditions:

- It must be novel – it should never have been published or publicly used before.
- It should be capable of industrial application – it must be something that can be industrially manufactured or used.
- It must be non-obvious – it should not be an invention that would have occurred to any skilled person in the relevant field.

Over the years, patent systems have been adopted by many countries because:

- They encourage the disclosure of information to the public, increasing the public's access to technical and scientific knowledge. Without the assurance of a patent, an individual or corporate inventor may choose to keep the details of an invention secret.
- They provide an incentive and reward for innovation and investment in research and development (R&D) and future inventions.
- The limited duration of a patent encourages the rapid commercialisation of inventions, so that the public receives a tangible benefit from the invention sooner rather than later.
- By encouraging the publication of details of inventions, patents help avoid duplication of research and stimulate further research, innovation and competition.
- Patents are perceived as a sound intellectual property title, granted in most territories after a rigorous examination process.

The patent system has been continuously developing during its entire existence, and this has contributed to its strength over time. To coordinate national patent systems and tackle the substantive and procedural issues in obtaining state and regional patents, several international agreements on patent protection exist. For substantive issues, the most important are the Paris Convention for the Protection of Industrial Property (1883) and the WTO Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) (1994), while the main patent treaties for procedural issues are the Patent Cooperation Treaty (1970) and the Patent Law Treaty (2000). There are also some other regional agreements, such as the European Patent Convention (EPC, 1973), Lusaka agreement (1976), Bangui Agreement (1977) and the Eurasian Patent Convention (1994). The European Patent Convention sets out rules for obtaining European patents which, when granted, split up into national patents in the designated countries. A revised version of the Convention (EPC 2000) and Implementation Regulations came into force in 2007.

Designs

Design rights protect the visual appearance of a product or its packaging, combining form and function. The minimum requirements for design protection through intellectual property (IP) rights are (i) novelty and (ii) originality or individual character, whose criteria respectively borrow from patent law (novelty) and copyright law (originality).

To be eligible for protection, a design must display aesthetic features, not be dictated solely by a technical function and not be predated by a known overall identical or similar design. Designs can be

expressed in two-dimensional (drawing) or three-dimensional (model) formats. Designs contribute significantly to the marketability of goods by adding commercial value to them, and are crucial assets in several industries, such as textiles, fashion, jewellery, mobile consumer devices, automobiles, domestic appliances, furnishing and decoration.

The regime for design protection differs from one country to another. In most jurisdictions, design protection is subject to registration, with minimal examination most of the time.

Design protection is an area that benefits from significant harmonisation at the levels of international filing as well as of substantive applicable law. The Hague Agreement (1925) concerning the international filing of industrial designs, as amended by the WIPO Geneva Act (1999), allows for centralised filing for design protection in the 65 countries that are currently parties to the Agreement. The recent adhesion of Korea, the United States (US), and the number of other countries planning to adhere, illustrates the expansion of design protection worldwide. For procedural issues, the classification of goods is governed by the Locarno Agreement (1968), and projects are under way to improve searches and update product indications.

In the European Union (EU), a popular road for filing for protection is through the European Union Intellectual Property Office (EUIPO) in Alicante, which operates the registered Community design system, valid in all EU member states. As for substantive law, EU-wide harmonisation has been achieved through Regulation No 6/2002. This provides for a Community design right, effective in all EU Member States, which grants protection for up to 25 years for registered designs, and for a shorter term of three years for unregistered designs.

At WIPO, discussions on a proposed Design Law Treaty are under way, with the objective of harmonising administrative aspects of the entire filing procedure. The decision whether to convene a diplomatic conference to adopt the Treaty should be taken in 2017.

A design right confers upon its owner the right to prevent unauthorised copying by third parties and to prohibit the making, selling, importing or exporting of products incorporating or applying the design. Depending on the country, the owner may also concurrently avail him or herself of the protection of copyright, trademark and patent laws. Due to the growing economic importance of designs in the modern economy, they have been garnering much more attention. Designs and designers are today often brought into the conception phase of a product or a service, and advances in design-related technology and manufacturing techniques have made possible the development of new products and services.

However, in view of the diversity of design laws, further harmonisation and guidance on the scope of protection of designs and its enforcement are needed for designs to prosper as a full-fledged IP right.

Trademarks

Trademarks allow consumers and businesses to differentiate between goods and services coming from different sources and to select the ones whose reputation they trust.

For manufacturers or service providers who have invested the time, effort and money to build up a good brand image, trademarks are a way to prevent others from unfairly taking advantage of their reputation. This ensures fair competition in the marketplace and encourages companies to invest in the quality and reputation of their products or services.

Trademark protection can apply to brands, names, signs, symbols and even colours, smells, sounds and shapes. This means trademarks protect almost any distinctive feature attached to a product or service.

In most countries, registration of a trademark in a national or regional government trademark office is for the protection of specific goods or services. A trademark holder can prevent others from using its trademark or a similar mark for the same or similar goods or services, if doing so is likely to cause confusion in the minds of the public. In many countries, famous or well-known trademarks also enjoy protection against uses that disparage, dilute or take unfair advantage of the reputation of such marks.

Almost all businesses, large and small, rely on trademarks. Trademark protection is used more than any other form of intellectual property in both developing as well as developed economies. Trademarks serve to guarantee origin to local consumers, and readily searchable trademark registers allow businesses to avoid selecting new marks that could be confused with existing ones.

There are several international agreements on trademark protection. The main ones, adopted by the largest number of countries, are the Paris Convention for the Protection of Industrial Property (1883) and the TRIPS agreement (1994). The Trademark Law Treaty (1994) and the Singapore Treaty on the Law of Trademarks (2006) have a relatively limited number of contracting parties.

For procedural issues, the main treaties are the Madrid Agreement concerning the International Registration of Marks (1891) and its Protocol (1989), which establishes French, English and Spanish as official languages, and the Nice Agreement concerning the International Classification of Goods and Services for the Purpose of Registration of Marks (1957).

There are also several regional arrangements that provide for protection in multiple countries through a single trademark registration. These include: the European Union Trade Mark (EUTM) – formerly known as the Community Trade Mark (CTM) – which allows a trademark holder to obtain a single trademark registration covering all member countries of the European Union; registrations with the Benelux Office for Intellectual Property (BOIP), which cover Belgium, the Netherlands and Luxembourg; trademarks filed through the African Intellectual Property Organization (OAPI) which cover essentially French-speaking countries in Africa; and the ARIPO Protocols, namely the Banjul Protocol on Marks which currently covers 10 African member states.

Geographical indications

The TRIPS agreement defines geographical indications as the indications that identify a good originating in the territory of a country, region or locality where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin.

The Paris Convention for the Protection of Industrial Property, the Madrid Agreement for the Repression of False or Deceptive Indications of Source on Goods (1891) and the Lisbon Agreement for the Protection of Appellations of Origin and their International Registration (1958), amended by the Geneva Act in 2015, also set general rules to guarantee protection for geographical indications.

Even though some jurisdictions do not accept every form of protection, there are basically three legal ways to classify a product according to the link between its geographical origin and its quality:

- Indications of source, which indicate that a product or service originates from a country, region or specified place, e.g. Made in France; Made in China; Product of the US.

- Geographical indications, which identify a good as originating in the territory of a Member, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially due to its geographical origin, e.g. Café de Colombia; Murano Glass; Toledo Steel.
- Appellations of origin, which indicate that a product originates in a specific region, but limited to those cases where the characteristics of the product are due to the geographical environment of that region, including natural and human factors, e.g. Champagne, Roquefort, Tequila.

Indications of source simply indicate the origin of the product, while both geographical indications and appellations of origin indicate a link between the goods and their place of origin. What distinguishes one from the other is that the characteristics of the goods protected under an appellation of origin are essentially or exclusively due to their geographical origin, including natural and human factors, and they usually imply higher quality and often a higher price because of the stricter rules of quality control imposed on the producers in the area protected.

Most countries provide for the registration of geographical registrations in their legislations, although terminology, procedures and rules can vary substantially.

Plant variety rights

A plant variety right (PVR) is a *sui generis* intellectual property (IP) protection system for plant varieties, which gives to the breeder the exclusive right to exploit the variety for at least 20 years (25 years for vines and trees).

A plant variety is eligible for protection if it is:

- New – it must not have been exploited in the protected territory for more than one year or elsewhere for more than four (or six) years before the date of application.
- Distinct – it must be clearly distinguishable from any other variety whose existence is a matter of common knowledge at the time of the filing of the application.
- Uniform – it must be sufficiently uniform in its relevant characteristics.
- Stable – its relevant characteristics must remain unchanged after repeated propagation.
- Designated by a suitable denomination.

The PVR does not protect the variety as such – as an invention is protected by a patent – only certain of its embodiments. It is the propagating material that is covered by the exclusive right of the titleholder, so that its production, reproduction, sales, import and export and related activities can be controlled. In some countries, harvested material from the protected variety, as well as products made directly from harvested material, may also be protected by such rights.

A unique feature in the PVR system and one of its most important exceptions is the so-called breeders' exemption, which allows breeders to use protected varieties in the development, and subsequent exploitation, of new varieties. The breeders' exemption encourages the improvement of varieties, given that a new variety cannot be developed without using existing material.

The only international agreement on Plant Variety Rights is the International Convention for the Protection of New Varieties of Plants (1961, revised in 1972, 1978 and 1991), which is governed by the Union for the Protection of New Varieties of Plants (UPOV). At present more than 95,000 PVR titles are in force in the territories of the UPOV members.

Article 27(3)(b) of the TRIPS Agreement also refers to plant varieties; it obliges the members of the World Trade Organization to provide for the protection of plant varieties either by patents, by an effective *sui generis* system or by any combination thereof.

Developments having an impact on intellectual property

Economic, social, political and technological developments have a fundamental impact on how intellectual property (IP) is created, exploited and used. Existing systems of IP protection are constantly adapting to accommodate these changes, as they have since their inception. Businesses reliant on creating value from IP assets must, to remain competitive, ensure that the means available to them to protect their intellectual property are still effective in this evolving environment.

This introduction describes the main forces changing the IP landscape today and their possible impact on the creation and exploitation of intellectual property. Among these are:

1. Geographical developments
2. Technological developments
3. The interplay with societal and political issues
4. Changes in the ways businesses operate.

1. Geographical developments

Science and research and development (R&D) are now more open, collaborative, and geographically dispersed. A multipolar world of research and innovation has emerged where R&D efforts are simultaneously more globalised and more localised and include the participation of an increasing variety of actors in emerging countries. For example, the ten top-ranked countries in the 2016 Global Innovation Index include Singapore, while the top 40 include China, Hong Kong (China), Israel, Korea and Malaysia. Countries regularly featuring in the top 40 have generally made innovation a key priority, supported by steady investment in R&D. Technological catch-up and technology diffusion are, however, slow evolutionary processes, and despite the increasingly global nature of scientific and technological activity, the majority of activities are still concentrated in high-income economies and select middle-income economies such as Brazil, China, India, and South Africa.²

Changes in patent filing over the past 20 years reflect this geographical evolution. Three Asian countries are now among the top five patent filing countries in the World Intellectual Property Organization's (WIPO) PCT System, with Japan and China in second and third position after the United States, and Korea in fifth position after Germany.³ In 2016, residents of China accounted for the largest numbers of applications filed throughout the world for patents, utility models and industrial designs.

² *The Global Innovation Index 2016 – Winning with Global Innovation*, www.globalinnovationindex.org/gii-2016-report.

³ See www.wipo.int/pressroom/en/articles/2017/article_0002.html.

This gradual evolution in the geographical distribution of innovation, facilitated by easier communications through Information and Communication Technology (ICT), has both resulted from and contributed to more cross-border collaborations in innovation between actors across the world, not only from the private sector but also from public institutions. Businesses, even small ones, are also operating and trading on an increasingly international scale. The cross-border nature of business activities and innovation partnerships, as well as the more prevalent use of the IP system by businesses around the world, are likely to lead to more cross-border IP transactions and may result in multi-jurisdictional IP litigation becoming more common. Globally active businesses, including those in services sectors, are therefore confronted with issues relating to the applicable national law and jurisdiction with respect to IP transactions. Enforcement of intellectual property rights in multiple jurisdictions is also a formidable challenge in view of the different systems of law and procedures and functioning of national courts.

The global nature of commerce and business operations has also added challenges for managing IP assets, such as deciding where to file for registered rights, and in ensuring freedom to operate in the various countries where a company is active. The increase in filings of different IP rights worldwide gives rise to additional considerations for businesses; for instance, as utility models are considered prior art which can destroy novelty worldwide, the large numbers of utility model registrations in countries like China can pose challenges for businesses which seek to ensure that their inventions have not been anticipated.

There is rising awareness within businesses around the world engaged in the knowledge economy that they have to better leverage and manage their intangible assets as part of their business operations and strategies. There is, therefore, an increasing need in local business communities for well-functioning IP systems in their countries that serve their needs, as well as for expertise on how to manage IP assets.

A similar need for judicial expertise in IP is being experienced in countries where IP-related litigation is becoming more frequent. This has led to a growing number of countries establishing specialised IP courts, tribunals or chambers.⁴

These factors underpin and continue to support the rationale for working towards more consistent intellectual property norms internationally. Harmonisation through treaties dates from the Paris Convention (1883) through to the World Trade Organization (WTO) TRIPS agreement – which linked IP rights to the international trading system and its sanctions mechanism – and to more recent WIPO treaties⁵. So-called soft law instruments, such as guidelines or recommendations, are also being used to define new norms which can potentially be made binding through integration into treaties, by adoption into national law or by reference in trade agreements. While multilateral norm-making necessarily lags behind real world development, due to the long time frame required to obtain worldwide consensus, IP provisions in bilateral, plurilateral or regional agreements provide elements of convergence that can form the building blocks of future multilateral discussions.

⁴ ICC published a report in 2016 comparing the different specialised systems established worldwide for IP litigation. See *Adjudicating Intellectual Property Disputes: an ICC Report on Specialised IP Jurisdictions Worldwide*, iccwbo.org/publication/adjudicating-intellectual-property-disputes-an-icc-report-on-specialised-ip-jurisdictions/.

⁵ Such as the Trademark Law Treaty (TLT), the WIPO Copyright Treaty (WCT), the WIPO Performances and Phonograms Treaty (WPPT), the Singapore Treaty on the Law of Trademarks, the Beijing Treaty on Audiovisual Performances or the Marrakesh VIP Treaty, all adopted between 1994 and 2013.

2. Technological developments

The development and commercial application of new technologies are constantly generating new types of products, services and processes, many of which can be protected by IP rights. Such new technologies can have a large impact on the way IP assets are created and used, as well as on how products and services based on IP assets are produced and distributed. This in turn has important consequences on how companies manage and protect IP rights, and control the production, distribution and use of their intellectual property.

New technologies and technology convergence are influencing how intellectual property is being created. Product and technology convergence and complexity, and easier creative interaction between distant partners thanks to ICT tools, are driving more collaborative innovation. Nowadays IP is more likely to be created collectively by a team of different actors, each with specific expertise, often in different countries, rather than by a single organisation. Collaboration is also being driven by the increased need for interoperability, inherent in communication technologies and platforms, and also now in the Internet of Things (IoT), Machine to Machine (M2M) communication and the Industrial Internet⁶. Various standard-setting organisations and industry associations are working on technical standards necessary for such interoperability with the most innovative technologies available under fair, reasonable and non-discriminatory (FRAND) licensing. Increasingly intelligent machines and devices – such as robots, drones, satellites, and connected machines and appliances – produce valuable information which can result in IP assets, potentially raising questions concerning the notion of creation and invention, and the ownership of IP produced by artificial intelligence (AI).

Technological developments also bring both opportunities and challenges for the distribution and control of IP assets. ICTs, and now 3D printing, have facilitated the dissemination of IP assets in dematerialised form and allowed the development of new distribution models. Easier distribution has however also significantly increased difficulties in controlling unauthorised distribution of IP assets such as copyrighted works, trademarks, designs and trade secrets, and in enforcing IP rights. The ubiquity of devices and appliances which can be used to access information on the Internet makes this challenge all the more formidable. 3D printing has the potential of facilitating the production by consumers of goods based on IP-protected knowledge and designs, but for the moment is used primarily at the industrial level. New technologies like blockchain are also being explored to authenticate and communicate information concerning digitally distributed IP assets.

The IP system has always shown flexibility in adapting to new technologies and will continue to do so in the future. Newer areas of technological innovation such as nanotechnology⁷, synthetic biology, genomics, Internet of Everything (including IoT, M2M and the Industrial Internet), each have their own IP specificities, as does the convergence of different technologies, such as biotechnology or nanotechnology, with ICT. One difficulty in nanotechnology, for example, is that some of the materials and systems developed, while highly miniaturised, will provide functions that already exist in currently used materials and systems, thus posing challenges for the patent system to provide for adequate and balanced protection in this field. The data collection and exchange functions of IoE may raise IP issues with respect to IP-protectable assets resulting from data collected, including trade secrets protection in the case of sensitive confidential business information and potential database rights.

The emergence of other new technologies in the future will also have implications for IP protection which may go beyond the issues being discussed today.

⁶ See the *ICC Policy Primer on The Internet of Everything for an overview of these technologies*; iccwbo.org/publication/icc-policy-primer-on-the-internet-of-everything/.

⁷ Various new technologies that focus on developing devices, systems, materials, biologics and other structures at the nano, or billionth of a meter, level.

3. The interplay with societal and political issues

Long considered a technical issue, IP policy is now firmly established in the political arena and is often held up to public scrutiny. Policy makers have to constantly strive to maintain the delicate balance necessary to incentivise creation and innovation while preserving the interests of users, so that the system benefits society as a whole.

In recent years, two important new multilateral frameworks which will have a broad impact on all areas of policy have been agreed. The UN 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs) – which came into force in 2016 – have set a new developmental benchmark for the international community. The Paris Agreement, under the UN Framework Convention for Climate Change, opened for signature in April 2016 and marks several paradigm shifts in international climate policies. Innovation and collaboration will play an important role in helping achieve the goals set out by the international community for both agreements, and IP will be a key factor enabling this.⁸

The 2030 Development Agenda will provide a guiding framework for the multiple international organisations in which IP is discussed. In addition to WIPO and the WTO, these include the World Health Organization (WHO), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Conference on Trade and Development (UNCTAD), the UN Human Rights Council, the UN Economic and Social Council (ECOSOC), the Convention on Biological Diversity (CBD) and the UN Framework Convention on Climate Change (UNFCCC), as well as other UN bodies. The role of IP protection in socially and culturally sensitive areas such as healthcare, ethics, development, education, environmental protection, competition policy, privacy, consumer protection, and food security is widely debated both at national and international levels.

A core debate is on the role of intellectual property in promoting development. While some countries view strong IP protection as being an important factor for stimulating innovation, others see this as an obstacle to development. The differences in views between countries as to how the IP system should evolve have made it difficult for international agreements to be achieved in many areas of IP, e.g. in discussions on patents at WIPO.

Some countries feel that proprietary rights for providers should be defined over genetic resources, traditional knowledge and cultural expressions – which they consider to be valuable elements of their national heritage – to allow them to control their use and to share benefits from their commercial exploitation. Although some issues have been addressed in the Nagoya Protocol on Access and Benefit Sharing⁹, the long-standing, and as yet unresolved, discussions in WIPO on possible international instruments in this area attest to the difficulties in adapting IP concepts to this context.¹⁰

The recognised economic importance of intellectual property has continued to make it an important issue in trade relations between states, as shown by the inclusion of IP issues in recent plurilateral and bilateral trade negotiations, such as the Trans-Pacific Partnership (TPP) and the Transatlantic Trade and Investment Partnership (TTIP). Proposals in free trade agreements to strengthen the protection of intellectual property are often controversial, and can engender lively political debate at the national level. A number of IP-related issues also continue to be discussed in the context of the WTO Doha Development Agenda, including geographical indications, the relationship between TRIPS

⁸ See section D.II.2 on Climate Change.

⁹ Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity to the Convention on Biological Diversity, www.cbd.int/abs/.

¹⁰ See section B.IX.2 on Indigenous / community / traditional rights.

and the Convention on Biological Diversity (CBD) and the transfer of technology to least-developed countries, and IP-related disputes continue to feature in WTO dispute settlement proceedings.

The dynamics of international intergovernmental discussions on IP are largely shaped by differences between the perspectives of exporters and importers of goods and services with high intellectual property content; while IP-exporting countries generally support higher IP protection, IP-importing countries prefer less stringent rules. These traditional divisions are, however, now being blurred because of the emergence of innovative activity and industries in a number of countries which are beginning to view IP as a potential tool for promoting national innovation and economic development.

A diversity of actors, including consumer organisations, groups in academia and other civil society organisations, are taking a very active part in the debate on IP-related policy issues. Such groups are in some cases able to galvanise public opinion very effectively against initiatives to harmonise or strengthen IP protection. Industries with different business models also express different, and sometimes conflicting, desiderata for the evolution of the IP system. The addition of such voices to the debate has increased awareness and interest from a broader group of stakeholders in debates around intellectual property and, consequently, has resulted in a more complex policymaking process in this area.

This increasing politicisation of IP issues means that business – in addition to engaging in the deliberations of international organisations – must also focus on communicating to the general public effectively on intellectual property issues. In particular, business must explain how IP works in practice to support the processes of innovation and creation. In political discussions, many doubts and objections, particularly with regard to sensitive areas, are caused by a lack of understanding as to how the IP system functions as a positive tool for achieving economic growth and other societal benefits.

It must also be explained that IP protection not only provides incentives for investments in research and development, but also enhances transparency and the dissemination of knowledge. For example, without the assurance of a patent – which provides for the publication of the patented invention – inventors are less likely to share information on their inventions and more likely to keep them secret. Similarly, the establishment of protection for copyright works is intended to facilitate their broader dissemination, by providing incentives for creation and distribution. It must also be explained that a ban or restriction on patents will not help to prevent undesirable developments in new, sensitive technologies.

In political discussions, the benefits and value of IP protection for small companies are sometimes questioned. The IP system is in fact a precondition for markets for technologies and innovations that are often developed by small and medium enterprises (SMEs), spin-offs and start-ups, and intellectual property rights play an important role in innovation collaboration, specialisation and financing.¹¹ SMEs are often linked to universities and research institutions, which are also using IP to leverage their research and work with commercial partners. SMEs today rely heavily on several types of the broad range of tools offered by the IP system – such as trademarks, geographical indications and plant variety rights.

Business must better communicate about these mechanisms, and focus on encouraging education to improve understanding of the role of intellectual property in innovative and creative processes.

¹¹ See ICC research paper *Enhancing Intellectual Property Management and Appropriation by Innovative SMEs* at iccwbo.org/global-issues-trends/innovation-ip/innovation/.

4. Changes in the ways businesses operate

The evolution of business practices and the environment in which companies operate may have an impact on the way companies protect and manage their IP, and their needs with respect to the IP system. Some of these trends are outlined below.

Intellectual property has long been used by businesses to increase their competitiveness in commercialising goods and services. However, there is growing recognition that IP is a valuable asset in itself that can bring in revenue through licensing, improve a company's balance sheet, increase stock value, or be used as collateral for loans or other financing. The market for trading in IP is growing, both in size and in the number of players, which include various types of intermediaries and trading platforms. New business models proposing inventive solutions for IP creation, licensing, and searching have also been introduced.

This development makes the valuation of IP even more relevant than it was before. A number of valuation techniques have been developed, but since the value of IP is context-based and may have various value dimensions at the same time, the development of international standardised techniques will be a challenge. Moreover, accounting rules may require effective methods for valuing IP in order to allow the business impact to be visualised.

A range of factors – including globalisation, advances in ICT, growing technological complexity, and cross-industry convergence – has induced business and other innovative organisations to engage increasingly in innovation collaborations. Open innovation practices range from R&D partnerships and licensing to newer forms such as innovation challenges and crowdsourcing. The complexity of products, specialisation and the reorganisation of production in order to benefit from economies of scale and reduced costs are also leading to increasingly decentralised production, distribution and outsourcing. This increasing tendency to work with outside partners makes it more important for innovative companies and non-commercial institutions of all sizes to actively manage their knowledge assets and confidential information, especially when operations take place across borders.

The increasing interaction between different economic actors also raises the question of how the interests of various parties can best be balanced. Areas of interaction in which this question is particularly pertinent include technological standards for interoperability and the control of unauthorised uses of IP-protected material on the Internet.

In many industries, companies rely on standards to help enable interoperability of technologies, products and services through the development of technical specifications in formal or informal Standards Setting Organizations (SSOs). To reconcile the need for technology owners to obtain a return on R&D investment with the desire to facilitate broad implementation of the standard under fair, reasonable and non-discriminatory licensing terms and conditions for the underlying IP, SSOs generally develop IP policies that seek to balance the interests of all of their members, patent owners, equipment manufacturers, and service providers as well as customers. In the area of software interoperability, the question of access to code protected by copyright may also arise.

In discussions on how to control unauthorised uses of IP-protected material on the Internet, there has also been much debate on how to balance the interests of the different players participating in the Internet environment, such as content providers and other IP rightsholders, intermediaries (e.g. Internet service providers, payment processors, advertisers and search engines), equipment manufacturers and stakeholders in the domain names system.

This move towards increased collaboration, increasing amounts of data flows, and the ease with which confidential business information can now be transferred or published have presented huge challenges for companies to control the flow of information, including confidential business information. This challenge is exacerbated by the ubiquity of the Internet, miniaturisation of storage devices, the blurring of divisions between personal and professional devices, and the increasing reliance on connectivity and data exchange between components in industrial processes. Differences in legal requirements and rules for the protection of trade secrets or confidential business information in different jurisdictions pose challenges for companies operating across borders, e.g., in some jurisdictions, data privacy rules limit the possibilities for evidence-gathering especially in cases of employees leaking information.

With an increasingly data-driven economy, questions concerning rights over data, as well as responsibilities in areas such as data privacy arise. The task of managing data in companies is also growing more complex as data collection becomes ubiquitous through the Internet of Everything, drones and satellites, and as the volume of data collected increases and data regulation becomes more prevalent. Although databases are monetised and traded, formal database protection does not exist in many jurisdictions beyond the EU and discussions on rights and responsibilities over data and data flows are taking place in many fora.¹²

As communication through the Internet has become essential for almost all businesses, domain names have become, in some cases, valuable assets which companies have to manage like other IP assets. They are also monetised and traded as well as used as commodities for speculative gain. Although the possibility of registering Internationalised Domain Names (IDNs) and new Generic Top Level Domains (gTLDs) opened up new possibilities for companies and brands to control their own domains, new gTLDs remain a very small percentage of the total number of registered domain names. The registration of domain names that are identical or similar to trademarks for trafficking or use in bad faith continues to be problematic for companies despite attempts by ICANN to introduce more control and dispute resolution mechanisms.

Increasingly short product life cycles in many industries also influence the way companies protect their intellectual assets. The length of time and amount of investment required to obtain the IP rights, especially patents, can be substantial relative to the effective life of the product. Another factor to be taken into account is the activity of some businesses, known as Patent Assertion or Non-Practising Entities, whose sole or primary purpose is asserting patents against other companies, in order to generate revenue. The growth of services in many economies, and the strategies used by companies to support and protect business innovations underlying the provision of different types of services, will also play a part in how the IP system is used and will evolve.

Many companies are placing more emphasis on corporate social responsibility (CSR) and sustainable development as the social and environmental impact of business operations come under increasing public scrutiny. Implementation of CSR and sustainable development policies within companies may have an effect on how intellectual property is used and managed, in the same way that other company practices and operations may be impacted.

¹² See section B.IX.1 on Information products e.g. databases.

A. Creating value from intellectual property

I. MANAGING INTELLECTUAL PROPERTY ASSETS TO CREATE VALUE

BACKGROUND | The proper management of intellectual property (IP) assets is important for businesses: to capture the value of their ideas and investments; protect their interests when engaging in collaborations; ensure freedom to operate in a given sector and market by avoiding infringement of third party IP rights, thereby minimising licensing costs and litigation; signal their value to investors, partners, competitors and customers; and, in some cases, provide a revenue stream.

However, despite increasing recognition of the importance of IP management in business, companies – especially small and medium enterprises (SMEs) and companies in countries with less experience of IP – need to better understand the IP system so as to optimise its net value to them.

CURRENT LANDSCAPE | Intellectual property law, like all commercial law, has to be linked with the strategic commercial objectives of each business. It can be extremely complex, and cannot be viewed in a simplified manner. The term intellectual property is itself deceptive, as there is no uniformity of the various rights covered by the phrase. Patents, trademarks, copyright, the law of confidential information (trade secrets, know-how) and other IP law have differing public policy justifications and widely divergent characteristics. Likewise, no business can have an IP policy or strategy that is uniform, unless the business is exclusively concerned with just one of these forms of protection for intellectual creation.

At the top level, businesses (once they have appreciated the above) may need to make decisions on the following:

- *Patenting*: The key issue here is that patenting is expensive and that, because of the novelty requirements for patenting, a decision on whether or not to file patent applications has to be made as soon as possible after the R&D has been completed, and usually long before its prospects of commercial success can be accurately assessed. This means that a statistical approach has to be adopted and that some of the money spent on patenting will prove to be wasted.
- *Information security*: There have been well-publicised cases of loss of technical and commercial information, now made much easier because most information is recorded in electronic form rather than on paper. While attacks by expert hackers are prominently reported – and indeed one thing to guard against, often at high cost – there are precautions that can be taken at lower cost, such as having a system for classifying material to indicate the level of precaution that should be taken with it – for instance, above a certain level sending material over the public Internet might not be allowed – and protecting against employee misbehaviour by segregating users of servers and blocking USB ports.
- *Branding and associated brand protection through trademark law and otherwise*: A key choice is between monolithic branding – one corporate brand, supplemented by descriptive names or codes – and branding primarily by individual product. For instance, Virgin and BMW adopt the first approach with Virgin Mobile, etc. and BMW 530i, etc.; while most manufacturers of alcoholic drinks and confectionery adopt the second approach with Smirnoff, etc. (Diageo) and KitKat, etc. (Nestlé).

- *Sub-contracting work that will generate technology, artwork, software and data:* Companies need to ensure that the IP terms in these contracts protect their interests, even when the payment due under the contract is small.
- *Collaboration to generate technology, artwork, software and data:* The term open innovation often misleads businesspeople into thinking that an uncontrolled flow of know-how and the non-patenting of inventions is the new norm. Enforcement of well-drafted contractual restrictions, marking of sensitive documents, and patenting before disclosure to collaborators can all be used to preserve value for disclosers.
- In some business sectors/territories, *the response to patent assertion entities*; and
- *The extent to which (i) licensing can generate extra revenue without damaging the core business of making and selling products and services, and (ii) cross-licensing of patents is a means of achieving freedom to operate:* Typically, (i) and (ii) will be relatively unimportant in the pharmaceuticals sector, (i) will be relatively important in the manufacture of products that are expensive or difficult to transport, and (ii) will be relatively important in the information and communications technology sector, especially in relation to standards (see section A.II.2.ii).

To achieve their policy and strategy goals, decision-makers in companies need to:

- Better understand the basics of IP law; and
- Employ or consult professional legal advisers of high calibre who can engage with their particular business model and explain the appropriate legal options.

FUTURE PERSPECTIVES | As economies around the world try to move up the economic value chain by producing value-added products and services, business communities in some of these countries are beginning to recognise the role of intellectual property in capturing this added value. To be able to properly manage and create value from their IP assets, however, businesses need effective, predictable and stable IP systems that encourage investment in creation and innovation.

Governments in some countries have recognised the importance of IP for their national industries and economies, and have supported the establishment of programmes to raise awareness of the role of IP and to help companies better manage their intellectual assets. However, many of these programmes have been overly focused on registration of rights and have not sufficiently linked IP to business strategies or addressed IP management.

Business membership organisations, such as chambers of commerce, can help raise awareness among their member companies on the role IP can play in supporting their commercial aims, as well as provide services to help companies manage their IP. There are also an increasing number of commercial services to train businesses in managing their IP assets, a sign of the growing interest by companies in IP management.

The trading and valuation of IP are growing sectors, demonstrating the increasing recognition of the potential value of IP in its own right (see section A.III Valuation and monetisation of IP assets).

ICC CONTRIBUTIONS | ICC's Innovation and IP research series discuss the role of IP and IP management in the innovation process: for SMEs, in the context of open innovation, in relation to

trade secrets and in technology transfer transactions¹³. The joint ICC – WIPO handbook *Making IP Work for Business* gives guidance on how chambers of commerce and business associations can set up IP services for business, including in the area of IP management¹⁴.

II. LICENSING

1. General issues

BACKGROUND | As intellectual property (IP) rights continue to grow as a portion of a business's assets around the world, business deals involving the licensing of such rights – whether as a licensor or licensee – are also becoming more common. In some industries, such as entertainment and media, they are the core of the business activity and commerce. Licensing is also a key channel for the transfer of technology and know-how, and for the dissemination of creative works.

Despite its growth, however, IP licensing is fraught with perils that may not be obvious to businesses, especially where the licensing deals may involve IP rights in multiple jurisdictions or different types of rights. Different jurisdictions have different laws that must be taken into consideration for each individual licence, and different types of IP involve different laws that can also affect the terms of any licence under intellectual property rights.

CURRENT LANDSCAPE | As a general matter, principles of contract law should apply to IP licence agreements, including country-specific laws – such as the Uniform Commercial Code for IP licences governed under the laws of the United States – as well as international laws – such as the United Nations Convention on Contracts for the International Sale of Goods (CISG) – for IP licences between businesses in signatory countries. In addition, many IP-specific international laws, rules and regulations may apply, often indirectly or through national implementation, such as rules promulgated by WIPO, the Paris Convention, NAFTA, GATT, TRIPS, or regional laws such as the EU Trade Marks Directive (2015/2436) and the new EU Trade Mark Regulation (2015/2424). However, how those laws, rules and regulations apply may vary from jurisdiction to jurisdiction and could depend on whether the licence contract is to be implemented in a common law jurisdiction or civil law jurisdiction. Regardless of how individual laws are applied, if at all, the following are some considerations that any party or potential party to an IP licence may face and should carefully evaluate before entering into a final licence agreement.

a) *General considerations*

- *Identification of the parties*: One seemingly obvious, but critically important, consideration for any IP licence is the identification of the parties to the agreement, especially where one party is an entity with a more complex corporate structure. Due diligence is critical to settle issues such as who owns the relevant IP rights, which entities will exercise the rights, which parties have registered relevant IP rights, and whether third parties – affiliated or not – have any rights that can affect the licence terms. Resolution of such issues up front ensures that the parties are able to grant the IP rights as intended, without interference and unintended consequences.

¹³ See iccwbo.org/global-issues-trends/innovation-ip/innovation/.

¹⁴ See www.wipo.int/publications/en/details.jsp?id=295.

- *Governing law:* Most jurisdictions offer some leeway for choice-of-law provisions in allowing the parties to an IP licence to select which jurisdiction's laws should govern the agreement and the parties' obligations under the agreement. Nevertheless, parties must still be aware of any laws of the applicable jurisdiction that are mandatory and cannot be waived or circumvented by contract, such as local antitrust and unfair competition laws, as well as tax policies. Furthermore, the parties must confirm that the intended IP right is actually protectable within the relevant jurisdiction and find out what the rules are for its registration.
 - *Scope of rights:* One of the key business terms of any IP licence is the extent to which the licensee may use the licensed IP right. The parties must determine whether a licensee is entitled to use the full field of the invention or the entire category of goods and services denominated by a trademark, or only some subset of those rights. Will there be any territorial restrictions or rights to sub-license? Where the licensor intends to place some limits on the IP right being licensed, careful drafting of the grant of a licence is critical, especially because many restrictions raise antitrust and other anti-competition concerns in many jurisdictions. IP licence agreements between competitors are generally more heavily scrutinized than those between non-competitors, so careful descriptions of each of the parties' fields of operation and expertise may help any licence agreement withstand such scrutiny.
 - *Representations and warranties:* The terms of an IP licence agreement should include specific representations and warranties, including specific representations and warranties directed to the licensed IP right(s), i.e. ownership, full scope of rights, etc., though such terms are no substitute for thorough due diligence before the agreement is executed. Related to such representations, the parties should negotiate any indemnification provisions and limitations of liability, as well as the duties and obligations to enforce and protect the IP right(s) and comply with any governmental regulations or registration requirements. The key goal in mind should be risk allocation at the outset rather than waiting for a dispute to arise.
 - *Registration of the licence agreement:* Different jurisdictions have different rules about whether an IP licence agreement itself – separate from the actual IP right – must be registered, typically depending on the type of IP right at issue. There may be benefits to registration, even if there is no legal requirement. Thus, the parties should consider whether the licence agreement should be registered, and who bears the responsibility for ensuring such registration.
 - *Term and termination:* The parties should give significant consideration to the length of an IP licence agreement, and to provisions for the termination of the agreement, which can be complicated if not due to the expiration of the agreement or pursuant to defined terms. Do the parties wish to allow for termination at will, or only termination for cause? What will their respective obligations be after termination, including handling of confidential information and any sell-off periods? Local laws may also require specific notice periods, but such notice should be considered by the parties in any event. Negotiating these rights and obligations up front can eliminate, or at least reduce, disputes that frequently arise upon termination of a licensing agreement.
- b) *Patent and know-how specific considerations*
- *Scope of grant:* In addition to the field of use and territorial scope issues mentioned above, parties to a patent licence agreement may wish to further divide the scope of the grant into the various rights granted under the patent laws of the relevant jurisdiction. For example, the US patent laws, like many other jurisdictions, grant patent owners the exclusive right to make, use and sell the patented invention. A patent licensor may wish to grant one licensee only the exclusive right to make or manufacture the patented invention, while granting another licensee

the exclusive right to distribute or sell the invention further down the stream of commerce, such as to retailers or end-users. In many cases, patent licence agreements will also cover secret technical information beyond the scope of the patented invention. Such know-how licence should in particular define the way of access, use, disclosure and confidentiality obligations of the licensee as well as the duration of the licence.

- *Cross-licensing*: With some patented inventions, opportunities may exist for cross-licensing among different aspects of a broader field of that invention, where each party grants a patent licence to the other party, effectively allowing both parties to combine resources to exploit the full field of the patented technology. Cross-licensing arrangements may also relate to the creation of patent pools, where multiple patent owners pool together their related patents covering a certain field for licensing to one another and to others who wish to participate. The parties, however, must be cautious about whether cross-licences are exclusive or non-exclusive. Exclusive cross-licences raise a greater risk of antitrust or other anti-competitive scrutiny from government authorities or even challenges by other potential competitors excluded from the cross-licensing arrangement. Indeed, in some jurisdictions, exclusive cross-licensing by competitors is prohibited.
- *Tying*: Patent owners/licensors often attempt to tie the licence grant for a patented invention to use of tangential or related items – though not covered by the patent – that also inure to the benefit of the licensor. Licensors also may try to tie negative obligations, namely requirements to refrain from making or selling items related to the invention. As with patent pools, tying is not necessarily anti-competitive or impermissible, but such arrangements often invite additional scrutiny and depend in large part upon the parties' relative market power. In some jurisdictions, negative tying is prohibited outright, regardless of market power.
- *Compulsory licences*: In some countries, a patent owner and potential licensor face the possibility of a compulsory licence being granted to the invention by a governmental authority, against the will of the owner. As a general matter, such compulsory licences will not be permitted for or granted to direct competitors. Nevertheless, a patent owner considering enforcement of its patents may wish to consider the risk of a compulsory licence when negotiating or litigating because a voluntary licence still gives the parties greater control over an ongoing relationship than a compulsory licence.

c) *Trademark-specific considerations*

- *Writing requirements*: Different jurisdictions have different requirements about whether a trademark licence agreement must be in writing. For example, US law does not require any written agreement, whereas certain European countries require licence agreements covering registered marks to be in writing and signed by the licensor (not necessarily by the licensee), though licences to unregistered trademarks need not be written or signed by anyone.
- *Quality control*: Although many jurisdictions have no express requirements regarding quality control provisions in a trademark licence agreement, licence agreements in some countries – such as the US – must include quality control rights to the licensor for the licence grant to be valid. Otherwise, the licensor runs a risk of losing rights to the trademark itself – not just the licence agreement – as a “naked” licence. In such a situation, both licensee and licensor lose their rights to prevent unauthorised use of the trademark. Quality control provisions frequently require balancing the licensor's genuine need for control of its trademark with a licensee's desire to avoid overly intrusive micro-management by the owner. Moreover, the parties must give consideration to antitrust and anti-competition laws, as well as the potential for liability arising from defective products under the control of both parties.

- *Ownership and good will:* In many countries, a trademark symbolises the goodwill developed and maintained by the trademark owner, not the licensee. Nevertheless, the parties to a trademark licence should specify in the agreement who retains ownership of the trademark and benefits from the licensed use, especially if the licensed use of the trademark potentially expands the scope of goods or services expressly covered by the trademark's prior use.
- *Policing and enforcement:* Because the trademark owner (licensor) generally benefits from the goodwill and ownership, enforcement and policing obligations also fall to the licensor in most situations. The parties, however, may wish to reallocate those obligations and the cost thereof, especially in the case of an exclusive licence. In either case, negotiating for mandatory assistance by the other party is also critical, and often necessary to bringing any litigation or other action against a third party.
- *Use restrictions:* Unlike patent licences, trademark licences generally are less scrutinised as anti-competitive for restricting a licensee's use of the trademark to certain goods or services, especially in jurisdictions where quality control is required. Restrictions are often necessary, in fact, to prevent a licensee from misusing, or expanding the use of, a trademark in such a way as to create confusion, dilute the licensed trademark or otherwise render the mark unprotectable. Thus, such restrictions are in the public interest and therefore more acceptable from a competitive standpoint.
- *Termination:* Termination of trademark licence agreements can be more complex than other IP licence agreements. Even the most carefully drafted termination provisions may be overridden by courts or governmental authorities, particularly in bankruptcy or insolvency contexts, thereby depriving one of the parties of its rights under the licence. In many jurisdictions, other than the US, licensees' interests are not protected by law, so licensees should consider anticipating this risk within the contract terms by taking alternative measures to protect their rights under the licence, and take the licensor's financial situation into account.

d) *Copyright-specific considerations*

- *Writing requirement:* As with patent and trademark licences, copyright licences have mixed requirements relating to whether the licence agreement must be in writing. Most jurisdictions require exclusive copyright licences to be in writing, typically signed by at least the licensor. Non-exclusive licences, on the other hand, typically need not be in writing and many jurisdictions recognise open and Creative Commons-style licences¹⁵. Few jurisdictions, if any, require copyright licences to be filed or registered with the relevant copyright office. The formalities involved also depend on whether the licence in question is a commercial contract or a unilateral contract as, for example, in the case of many Creative Commons licences.
- *Ownership:* As a general matter, the author or artist of a copyrighted work will retain ownership rights in the work, unless special circumstances – such as employment or permissible assignment – exist to convey title to another party. Parties should pay special attention to local laws and licence provisions concerning works commissioned or created in the course of employment, merchandising and the creation of other derivative works by a licensee, because different jurisdictions follow different rules. The parties generally can alter default ownership rules provided they carefully consider and draft the licence language, though most jurisdictions – but not the US – recognize “moral rights” that afford certain protections to authors and creators and cannot be waived. As a general matter, however, the implications of joint ownership of a copyright need to be considered since some jurisdictions require accounting

¹⁵ See creativecommons.org/.

and sharing of profits and/or consent of the other joint owners to assign or enforce the jointly owned copyright.

- *Royalty sharing:* In some jurisdictions, the copyright owner is entitled to receive any and all royalties derived from a copyright licence or sales of copyrighted works, regardless of the contributing authors. In other jurisdictions, there is a presumption that royalties will be shared among all authors – even if there is a single owner of the copyright – unless specified otherwise. Similarly, many jurisdictions recognize a form of the “first sale doctrine” (exhaustion of rights) in which a sale of a physical copy of a copyrighted work (an authorised copy) eliminates any further ability to control distribution or subsequent sales of that copy of the authorized work.

FUTURE PERSPECTIVES | As noted above, many of the issues flagged differ from jurisdiction to jurisdiction, and also vary enormously depending on the type of IP asset, industry and type of business or other parties concerned. National jurisdictions may make changes from time to time to their own rules of practice with respect to IP rights, registration requirements and ownership obligations which can affect licensing, e.g. the EU Trade Secrets Directive (2016)¹⁶ or the America Invents Act in the US (2012)¹⁷. Perhaps even more importantly, changes to other areas of the law, such as antitrust law and other competition regulations, may impact IP licensing in important ways. Knowledge of local laws is therefore critical for international IP licensing agreements and periodic review of previously agreed IP licences may prove valuable to ensure compliance with current (and future) laws and regulations.

ICC CONTRIBUTIONS | ICC has prepared a research paper, *The Dynamics of Global Technology and Knowledge Flows*, on channels for technology diffusion and dissemination, including licensing, as part of its research series on the role of IP in innovation.¹⁸ ICC has also developed an information booklet on IP licensing as well as several model contracts relating to licensing, including on technology transfer, trademark licensing and franchising¹⁹.

2. Specific situations

2.1 Collective administration and licensing of copyrights

BACKGROUND | Collective management of copyright can benefit rightsholders, users, and consumers by facilitating the efficient licensing of copyrighted works with minimal transaction costs, thus enabling new business models to use and distribute copyrighted works across platforms. In suitable cases, it is advantageous to both rightsholders and users to license copyrighted works collectively as long as the collective administration of copyrights takes place within a framework that provides transparency and accounts for the interests of all parties involved. Key to rightsholders is maintaining control over when and how to license their rights collectively.

The national nature of copyright requires that international businesses obtain licences in each relevant territory. In appropriate cases, collective management can facilitate such licensing in each territory, and cooperation between collectives through reciprocal agreements can further facilitate international licensing.

¹⁶ See section B.VIII on Trade Secrets / Confidential business information.

¹⁷ See section B.I. on Patents.

¹⁸ See iccwbo.org/global-issues-trends/innovation-ip/innovation/.

¹⁹ See store.iccwbo.org/.

CURRENT LANDSCAPE | New media and technology continue to create novel and innovative ways for rightsholders to distribute and exploit their works, in particular in online and mobile services, thus creating new licensing opportunities. Rightsholders are seeking to drive – and users seek – efficient and comprehensive multi-territorial licensing for different uses that enables the delivery of copyrighted works to consumers seamlessly and at proper price points, to the benefit of rightsholders, users and consumers.

Collectives are licensing within such new business models and cooperating internationally to harmonise databases and develop reciprocal arrangements to facilitate transnational licensing of copyrighted works.

Governments are also seeking to foster transnational licensing and transparency in collectives, while recognising the territorial nature of copyright and the prerogative of rightsholders to determine when it is appropriate to exploit exclusive rights directly or collectively. For example, the EU Directive on Collective Rights Management, which entered into force in April 2014, guarantees that rightsholders control the management of their rights and establishes EU-wide standards to ensure the proper functioning of the management of copyright and related rights by collective management organisations. It provides that collective rights must be licensed on the economic value of the use of the rights in trade, that is, on a willing buyer-willing seller basis. It requires users to provide usage reports on an accurate and timely basis. Finally, it also establishes rules for multi-territorial licensing of authors' rights in musical works for online use.

FUTURE PERSPECTIVES | Innovative online and mobile business models made possible by evolving technology will continue to foster new opportunities for licensing copyright, which in appropriate instances can be done most efficiently on a collective basis. The international nature of many such business models continues to increase the importance of transnational cooperation between collectives and multi-territorial licensing, wherever possible. An appropriate supervision of the legal framework should be ensured.

2.2 Patents and standards

BACKGROUND | Standards help enable the interoperability of technologies, products and services through the development of technical specifications in formal or informal Standards Setting Organizations (SSOs). Some of the most ubiquitous standards used today are in the telecommunications field, including the 3G, Long Term Evolution (LTE) and Wi-Fi standards. Both businesses and consumers have come to rely on such standards in their day-to-day activities.

To enable the incorporation of the most innovative and efficient technology in a standard under development, members of an SSO are encouraged to contribute their best technologies for consideration by the SSO for inclusion in the standard. It is generally recognized that to achieve the desired objective, contributors must be able to obtain a return on their R&D investment that is at least sufficient to maintain investment incentives, taking failed projects into account. This is usually achieved through the licensing of the use of the contributor's patented technology to which the contribution relates. However, such licensing must also be balanced with the need to facilitate broad implementation of the standard under terms and conditions for the underlying intellectual property (IP) that are (fair), reasonable and non-discriminatory ((F)RAND). Accordingly, SSOs generally develop IP policies that seek to balance the interests of all of their members, patent owners, equipment manufacturers and service providers, as well as implementers.

To ensure a wide availability of standardised technologies, while maintaining incentives for innovation, several approaches are commonly pursued. For example, most standards bodies seek the early

disclosure of the existence of potentially essential patents²⁰ and request that the patent holders declare their willingness to offer licences on (F)RAND terms and conditions. Implementers and patent holders are then free to negotiate detailed licensing terms which would often be customised to address the specific needs of both parties.

CURRENT LANDSCAPE | Various competition and governmental authorities around the world, including in the US, India, Japan and Korea, have given some guidance, or are in the process of doing so, on the activities of SSOs and the licensing of standard-essential patents (SEPs). In Europe, the European Commission (EC), in its 2011 Guidelines on Horizontal Cooperation Agreements, provides guidance to SSOs as to whether their activities are compatible with EU competition rules²¹, providing safe harbour principles.

Competition law has also been used by the European Commission to address concerns relating to the exercise of IP rights in the standards-setting context, most notably in decisions in 2014 relating to Samsung's and Motorola's pursuit of injunctive relief for alleged infringement of their SEPs. In 2013 the EC also commissioned a study to collect quantitative and qualitative data on IP-based standardisation, with a focus on identifying barriers to the efficient licensing of standard-essential patents and on possible solutions to overcome these barriers²². This was followed by a public consultation which resulted in a report issued in October 2015, as well as standards-related communications on the EC's Digital Single Market strategy. The consultation report concluded by noting "the need for a balanced framework for negotiations between rightsholders and implementers of standard-essential patents in order to ensure fair licensing conditions"²³.

Shortly before the release of this report, the Court of Justice of the European Union (CJEU) set out the parameters of when it may be an abuse for a SEP holder to seek an injunction against an infringer. For years, this had been one of the most controversial topics regarding SEPs. In July 2015, the CJEU introduced a safe harbour framework in the Huawei vs. ZTE case²⁴ for the pre-judicial negotiations establishing certain obligations for both the SEP holder and potential licensee. The Court made clear that if the alleged infringer does not meet its obligations under the decision, and the SEP holder meets all of its obligations of offering licence under (F)RAND terms, the patent holder will not be considered to be in breach of EU competition law by seeking an injunction. Since this decision, German courts have applied the tests, as prescribed by the CJEU, in a number of cases, and have both awarded and stayed the grant of injunctions.

Outside the EU, a number of US court decisions have recently determined what constitutes a (F)RAND rate for particular standard-essential patents. In other countries, including Brazil, China, and India, various court cases dealing with issues such as injunctions and (F)RAND terms and conditions for licensing standard-essential patents are pending.

Besides the availability of injunctive relief for essential patents, industry participants have been discussing for a number of years various topics relating to the patent policies of some SSOs in the ICT sector, including transparency, patent disclosure obligations and the definition of (F)RAND under those policies. As for the issue of injunctive relief, these topics are highly controversial as they directly

²⁰ An essential patent is typically considered to be a patent that is infringed by the use of a standard.

²¹ *Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Co-operation Agreements*. See [eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A52011XC0114\(04\)](http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A52011XC0114(04)).

²² *Patents and Standards: A Modern Framework for IPR-based Standardization 2014* by the ECSIP consortium for the European Commission – 25 May 2014.

²³ *Public Consultation on Patents and Standards – A Modern Framework for Standardization Involving Intellectual Property Rights* – European Commission – 27 October 2015.

²⁴ Judgment dated 16 July 2015, C-170-13.

impact the commercial positions of patent holders and the users of standards-compliant products and services.

More recently, arbitration has been used – including at the ICC International Court of Arbitration – to determine (F)RAND terms and conditions that cannot be agreed through negotiation by the respective parties. Such arbitrations can avoid the need to bring costly and lengthy court actions around the world to resolve licensing disputes between the SEP holder and the user of the standard where both parties are unable to agree the appropriate (F)RAND terms and conditions. As SEP holders often have a large number of such patents, arbitration has also the advantage of allowing determinations relating to the whole global portfolio.

FUTURE PERSPECTIVES | In April 2016 the European Commission released a Communication on its Information and Communications Technology (ICT) Standardisation Priorities for the Digital Single Market. The document highlighted the importance of standardisation to the digital economy and to the future development of a digital single market, noting that “areas such as eHealth, smart energy, intelligent transport systems and connected and automated vehicles, including trains, advanced manufacturing, smart homes and cities and smart farming will significantly benefit from the proposed prioritisation of standards”²⁵. The Commission identified five priority domains as building blocks of ICT standardisation: 5G communications, cloud computing, the Internet of Things, big data technologies and cyber security. Recognising the complexity of implementing complete digital value chains, the Communication notes uncertainties in: (i) identifying the relevant community of essential patent holders; (ii) the cost of the cumulated IP rights needed to implement the standard; (iii) the methodology applied to calculate the value of the licensing terms; and (iv) the regime regarding the settlement of disputes. Against this background, the Communication recognises that it would be beneficial to have a “fast, predictable, efficient and globally acceptable licensing approach, which ensures a fair return on investment for standard-essential patent holders and fair access to SEPs for all players – and especially SMEs...”²⁶. The Commission has stated that it will work with stakeholders on the identification of possible measures to address these issues.

III. VALUATION AND MONETISATION OF INTELLECTUAL PROPERTY ASSETS

BACKGROUND | Intellectual property (IP) rights are widely recognised as valuable assets and frequently play an important role in business strategy and overall corporate value. Businesses assess the value of their IP assets for many purposes – such as to obtain financing – to make informed investment and marketing decisions, to exploit IP through licensing, sale, and other means of trading, e.g. in the form of securities, as well as to fulfil company reporting requirements and assessment for taxation.

CURRENT LANDSCAPE | Besides industry practice and negotiation in the context of bilateral agreements, different methods are applied for valuing IP. These are, among others, relief from royalty, discounted cash flow, historic or replacement or replication costs, real options and Monte Carlo analysis. Professionals specialising in IP valuation, especially of brands and patents, use a variety of valuation methodologies. In some industries, valuation may be based on licensing agreements which often determine or are closely linked to asset production, e.g. in entertainment and media industries. New international accounting standards may lead to brands being recognised in balance sheets in more countries and, therefore, to other financial uses of IP. With respect to acquisitions, there can be different accounting treatments based on the acquisition price and historical cost depending on how

²⁵ See eur-lex.europa.eu/legal-content/EN/ALL/?uri=COM:2016:176:FIN.

²⁶ *Idem*.

matters such as goodwill are viewed under applicable local accounting policies. Due to the unique nature of IP, the most suitable method for valuation is typically selected on a case-by-case basis depending on the type of IP asset and industry. A combination of methods is sometimes used in an effort to show a fair range of values for a particular IP asset. Therefore, an approach which does not rely on a single universal method for valuation is needed to identify and quantify the economic benefits that IP assets are likely to generate, reflect return on investment, e.g. the risk, cost of capital or failed projects, and ultimately determine the likely value generation from those economic benefits.

Market-based valuation agreed between a willing buyer and a willing seller is the essence of licensing in market economies. General proxies for market-based approaches to valuation, which are relevant in some industries, include objective ratings models offered in the US, Europe and Japan, live multi-lot IP auctions, stock equity indexes and Exchange Traded Funds based on the value of corporate IP (NYSE: OTP and NYSE: OTR). A spectrum of IP-related financial products enables investor and company participation in the ownership of IP rights.

When valuing IP, it is also important to consider the scope and objective of the valuation. Valuing a single patent is different from valuing a patent portfolio covering a certain technology or the whole patent portfolio of an enterprise. In the case of technology transfer – particularly for early stage technologies – the main purpose of a valuation is strategic, rather than formal. In the event that standard-essential patents are subject to a monetary valuation, fair, reasonable and non-discriminatory (FRAND) terms are to be considered in the valuation modelling. Valuing know-how may be particularly challenging. The increasing volatility of the value of IP assets poses challenges irrespective of the purpose of the valuation.

In conducting due diligence studies on IP, businesses and the financial community need to recognise that the value of IP assets cannot be determined without proper legal analysis. Such studies provide more reliable information about the financial value of the IP, as well as information useful in setting a direction and strategy for the business. Other automatic techniques such as citation analysis provide, at best, a rough guide to IP value, and may be quite misleading.

Accounting rules relating to cost can cause assets developed internally to appear to be worth less than their real market value or potential return on investment, which in turn lowers the company's market value. This does not seem to be a major problem, as most countries allow the asset to be revalued and marked-to-market in subsequent years. However, in some countries revaluation is subject to restrictions.

In 2013, the *Final Report from the Expert Group on Intellectual Property Valuation* by the European Commission (EC) was published²⁷. This report represents a set of rules for companies to better value intangible assets in accounting terms and increase opportunities to get better value out of IP assets and leverage financing. In 2015, the Organisation for Economic Co-operation and Development (OECD) issued its final report on transfer pricing under Actions 8-10 of its Action Plan on Base Erosion and Profit Shifting (BEPS) related to intangible assets.²⁸ In 2011, the German Institute of Standardization (DIN) published its Norm 77100 Patent valuation – General Principles for Monetary Patent Valuation²⁹.

Intergovernmental organizations such as the World Intellectual Property Organization (WIPO), the OECD and the United Nations Economic Commission for Europe (UNECE) organise seminars and

²⁷ See *Final Report from the Expert Group on Intellectual Property Valuation* (2013) at ec.europa.eu/research/innovation-union/pdf/Expert_Group_Report_on_Intellectual_Property_Valuation_IP_web_2.pdf.

²⁸ See www.oecd.org/tax/beps/beps-actions.htm.

²⁹ See *Patentbewertung – Grundsätze der monetären Patentbewertung* (2011) at www.beuth.de/.

compile resources on this issue. The United Nations Commission on International Trade Law (UNCITRAL) has included IP assets in the scope of its Legislative Guide on Secured Transactions³⁰. This guide makes recommendations as to how country laws can be harmonised internationally to cut across legal restrictions on the availability of low-cost finance and credit.

Several regional and international initiatives have been undertaken to standardise valuation mechanisms. There are a number of organisations attempting to develop valuation standards, such as the US Financial Accounting Standards (FASB), the International Valuation Standards Committee (IVSC), the German Institute of Standardization (DIN), the International Financial Accounting Standards Board (IFASB), the International Organization for Standardization (ISO) and the OECD.

FUTURE PERSPECTIVES | Patent monetisation continues to thrive and is being promoted by, for example, the European Commission, notably as it relates to dormant IP assets of SMEs. On the other hand, there is an increase in the activity of patent assertion entities, which acquire, license and enforce patent rights, as well as of patent agglomeration entities, which acquire patent rights and license them to their members. The growing interest and value in monetising patents has also been seen in patent litigation. For example, patent litigation in US district courts increased by 15% from 2014 to 2015.³¹

An increasing number of governments have established programmes to encourage their enterprises to exploit their IP rights and to help companies raise funds based on such assets. The valuation of IP rights is important for enterprises in this context.

The monetisation activities of operating companies are on the rise. This is due to the fact that, as the perception of value to be obtained from idle IP assets increases, the stigma of asserting that value decreases and the need to obtain patents to fill portfolio gaps for cross-licensing and counterclaim assertion grows. Recent activity in the patent marketplace has shown that the value of a particular patent can be affected by a variety of contextual factors, ranging from the value of the underlying technology to the value that the patent adds to the existing portfolio of companies in a given industry.

Courts are paying increasing attention to ascertaining whether the methods and evidence used for valuing patents are appropriate, and have extensively commented on and increasingly scrutinised the analyses of patent damages provided by valuation expert reports in litigation.

³⁰ UNCITRAL Legislative Guide on Secured Transactions – Supplement on Security Rights in Intellectual Property (2011), www.uncitral.org/pdf/english/texts/security-lg/e/10-57126_Ebook_Suppl_SR_IP.pdf.

³¹ Lex Machina 2015 End-of-Year Trends, lexmachina.com/lex-machina-2015-end-of-year-trends/.

B. Obtaining intellectual property assets

I. PATENTS

1. Patent office cooperation and substantive patent law harmonisation

BACKGROUND | As business, trade and the impact of technology have become increasingly global, awareness of the value of intellectual assets such as patents has grown. This has led to a steady increase since the mid-1990s in the number of patent applications filed worldwide. As a result, the backlogs of pending patent applications in the major patent offices have been increasing. The problems this development brings for all parties concerned underline the need for facilitated worksharing between patent offices. In this context, worksharing means that patent offices share information about search strategies, search results and examination results for applications related to the same invention, and use that information in connection with search and examination work done on such applications. Patent offices engaged in such worksharing will retain the ultimate responsibility of deciding for themselves whether a patent should be granted or not.

The five major patent offices in the world, EPO (European Patent Office), JPO (Japan), KIPO (Korea), SIPO (China) and USPTO (US), collectively known as IP5, cooperate for worksharing purposes in a number of areas in the context of patent search and examination.

Another development in worksharing between patent offices is what is known as Patent Prosecution Highways (PPHs). These cooperative arrangements allow offices to make use of the examination and search work previously done by other participating offices thereby reducing the time necessary for the examination process. The first PPH was launched as a pilot program between the USPTO and the JPO in 2006.

The Patent Cooperation Treaty (PCT), a World Intellectual Property Organization (WIPO) treaty dating back to 1970, was designed to address many of the problems that arise with international backlogs of patent applications by providing a single high-quality search and examination in the international phase. The PCT system has been a great success, with 152 contracting states as of March 2017. Through a single application, patent protection can be applied for in all PCT member states. The PCT also postpones the major costs associated with seeking multinational patent protection and allows patent applicants more time to decide whether to validate the application in the desired countries or regions. The WIPO PCT Working Group has the task of improving the PCT system.

At the same time, work on patent law harmonisation at WIPO has been effectively stalled since negotiations on the then named Substantive Patent Law Treaty (SPLT) broke down in 2006. After the WIPO Standing Committee on the Law of Patents (SCP) resumed work in 2008, a number of topics have been discussed and different studies undertaken. However, the selection of topics to address has turned out to be difficult because of political differences between country groupings, and harmonisation of patent law is still outside the scope of these discussions.

CURRENT LANDSCAPE | The increased awareness of the value of intellectual capital such as patents has contributed to record levels of patent applications filed. In 2015, the total number of invention patent applications filed worldwide reached 2.9 million, a 7.8% increase over 2014.³²

³² See www.wipo.int/pressroom/en/articles/2016/article_0017.html.

The main countries contributing to this growth were China, Korea and the United States, with the Chinese patent office rising to become the largest patent office in the world in 2011 in terms of patent applications filed. This development has resulted in increased pressure on patent offices with regard to their backlogs.

In parallel, the topic of patent quality is increasingly discussed at the national as well as the international level, including within IP5, whose members offices collectively handle about 80% of the patent applications worldwide and about 95% of the applications filed under the PCT.³³

The IP5 has been working together since 2008 to harmonise the search and examination environment for patent searches and examination as well as to facilitate worksharing among the five offices, the main vehicle for which being the PCT.

The development of a new patent classification system, common to the IP5 offices, is one of its foundation projects, and the harmonisation of substantive and procedural patent law is also a priority.

To promote and facilitate progress on key issues under consideration at WIPO, and in particular to move forward on substantive patent law harmonisation, the Group B+ (Australia, Canada, Japan, New Zealand, the United States, South Korea, European Union member states, the European Commission, European Patent Office (EPO) member states, and the EPO) was established in 2005. A Group B+ sub-group is since 2014 working on non-prejudicial disclosures/grace period, conflicting applications, and prior user rights, based on the May 2014 report by the Tegernsee Group³⁴. It has also published a paper in June 2015 setting out objectives and principles guiding the harmonisation of substantive patent law.³⁵

The Patent Prosecution Highways (PPH) network continues to expand. By January 2017, 45 patent offices have taken part in PPH agreements, which can be seen as a sign of supporting further improvement of the PCT system. A patent applicant, whose patent claims are determined to be allowable or patentable in the office of first filing, can request, under a PPH agreement, for the corresponding application filed in another office to be accorded fast-track patent examination in the second office, provided certain conditions are met. The office of second filing can then make use of the search and examination results of the office of first filing, and the applicant may, as a result, be able to benefit from faster processing of a corresponding application filed in the second office. This facilitates the processing of patent applications by the offices participating in PPHs, resulting in savings both for the offices involved and for the applicants.

The America Invents Act (AIA) was enacted on 16 September 2011 and harmonised US patent laws with other systems around the world. Significant provisions included a change to a first-inventor-to-file standard, with pre-AIA provisions still applying for older patent applications. Furthermore, the AIA introduced several post-grant proceedings for challenging patents before the Patent Trial and Appeal Board (PTAB), which are often used in practice.

All of these projects – including improvements to the PCT system, PPHs and the work of the IP5 offices – show very encouraging signs of harmonisation and a strong interest among patent offices that engage in search and examination of patent applications to improve the conditions for cooperation on both multilateral and bilateral levels.

³³ See www.fiveipoffices.org/about.html.

³⁴ The Tegernsee Group – composed of heads of offices and experts from the patent offices of Denmark, France, Germany, Japan, the UK, the US and EPO – has been working since 2011 on four main issues identified as key to harmonisation: the grace period; the 18-month delay for publication of applications; the treatment of conflicting applications; and prior user rights.

³⁵ See www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/eng/wr04008.html.

FUTURE PERSPECTIVES | The problem with backlogs at the major patent offices is expected to continue for a considerable amount of time. Focusing on possible remedies will remain an important topic for patent offices and patent applicants as well as for third parties and for society at large.

As a major user of the PCT system, business has supported the system and encourages the efforts in WIPO to enhance it. In particular, business will continue to follow and support efforts towards improvement of the PCT system so as to make it an effective instrument for worksharing of patent searches and examination. While Patent Prosecution Highways are also positive developments, both in their own right and as means for the improvement of the PCT system, high quality patent searches and examination in the context of such worksharing systems are fundamentally important. Business will continue to follow and support the development of PPHs to ensure their effectiveness, sustainability and consistency with the PCT system, among other things. Moreover, the work of the IP5 offices on their foundation projects is an important and positive development and merits close monitoring by business.

While the continued blockage of substantive patent law harmonisation discussions in the WIPO SCP is of concern, the work and studies undertaken in the SCP, as well as in the WIPO PCT Working Group, deserve to be actively followed. Business should take an active part in the general debate on the balance of the patent system and explain its positive role in supporting innovation and economic development.

Governments should take steps to strengthen the PCT system, enhance the quality of work done by national offices under the system and encourage its use by applicants. Business also encourages work sharing efforts consistent with the PCT system, such as those represented by PPHs, as well as other initiatives to make progress towards substantive patent harmonisation.

ICC CONTRIBUTIONS | ICC attends the SCP sessions and has made statements and/or submitted papers on the topics of attorney-client privilege, exceptions and limitations to patent rights, technology transfer and standards and patents. ICC will continue to support the use and strengthening of the PCT and will also follow the work of the IP5 offices on worksharing. Moreover, ICC will also continue to follow the evolution of other worksharing initiatives, including the Patent Prosecution Highways (PPHs) that have been put in place between many patent offices. ICC has issued a paper entitled *Cooperation between patent offices: prior art searching of patent applications*.

2. Patent quality

BACKGROUND | The increasing numbers of patent applications filed worldwide in recent years has led to large backlogs of applications awaiting examination and decision as to grant. In parallel, concerns have been raised that the quality of patents granted has declined and that this may have shifted the balance between the interests of rightsholders, on the one hand, and the public interest on the other, putting the proper functioning of the patent system at risk.

CURRENT LANDSCAPE | As a result, the issue of patent quality is being studied and action is being taken at different levels. At the patent office level, patent quality is a major theme in many countries, both in the national context as well as in the context of cooperation between the IP5 patent offices³⁶. In the IP5's work, patent quality is one of the so-called foundation projects. The work at these technical levels is focused on elements such as patent examination procedures, worksharing between

³⁶ China, Japan, Korea, the US and the European Patent Office.

patent offices and quality control systems. The WIPO Standing Committee on the Law of Patents (SCP) also has patent quality as one of its study topics.

Patent quality is also studied from other angles. For example, the effects of low quality patents on the role of patents as incentives for innovation and technological development may be studied from an economic perspective, while the extent of invalidation of patents in legal proceedings can be studied from a legal viewpoint. The Organisation for Economic Development (OECD) is working on how to measure patent quality and has published a study on the subject.³⁷

The issue of the quality of patents has been incorporated in recent international treaties, such as the Trans-Pacific Partnership (TPP) agreement, which includes provisions on patent cooperation and worksharing between the patent offices of the signatory countries and the commitment to improve procedures for civil and criminal enforcement.³⁸

Many countries provide “patent hygiene” mechanisms, such as post-grant invalidation procedures that can be initiated by anyone on public interest grounds. Post-grant invalidation has become an important tool for improving patent quality in the US, following the introduction of the post-grant review system. In Europe, the forthcoming Unified Patent Court will have competence on post-grant invalidation of Unitary Patents (UPs) and other European patents (EPs) bound by the provisions on the Unified Patent Court. The Chinese court system has also made efforts to ensure patent quality by issuing rules regarding claim construction, which took effect in April 2016 and provide important guidance to applicants.³⁹

FUTURE PERSPECTIVES | Maintaining an adequate level of quality in granted patents is in the interest of all stakeholders. It is important for business to follow and engage in this work in different contexts.

3. Patentability of new uses

BACKGROUND | A new use for a known and eventually patented invention can be not only of commercial significance to the inventor of the new application, but also of societal importance. Hence, there are strong arguments for granting appropriate protection for such so-called second-use inventions.

CURRENT LANDSCAPE | Many countries provide for second-use patents, although the permitted claim format may vary. A number of bilateral free trade agreements expressly call for the patentability of all inventions, while the more recent Trans-Pacific Partnership agreement⁴⁰ requires signatories to provide patents for either new uses of a known product, new methods of using a known product, or new processes of using a known product.

In the Andean Community countries, uses may not be patented, whether already known or new, and Argentina is also following this criterion. The Andean Court of Justice (ACJ) has interpreted Article 27 of the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) as only requiring its members to grant protection for inventions that are related to products, compounds or processes exclusively. The ACJ further took the view that uses are a new category of invention

³⁷ See *OECD Science, Technology and Industry Working Papers 2013/03* – 6 June 2013.

³⁸ See TPP, Article 18.14.

³⁹ See *Several Issues Concerning the Application of Law in the Trial of Patent Infringement Dispute Cases (II)*.

⁴⁰ See TPP, Article 18.37.

different from those covered by TRIPS, so that protection for such uses does not have to be granted under TRIPS. The ACJ also held that uses are lacking industrial applicability.

The Indian Patents Act, in its Section 3, lists among non-patentable inventions the mere discovery of any new property or new use for a known substance as well as the mere use of a known process, machine or apparatus.⁴¹ While excluding only a certain claims format, the Enlarged Board of Appeals of the European Patent Office – in its decision G 2/08 issued in 2010 – explicitly confirmed a very broad approach to the patentability of such second uses under the current version of the European Patent Convention. The importance of second medical use claims has also been emphasised by a number of recent cases in Germany, the Netherlands and the UK.

FUTURE PERSPECTIVES | Business needs to convince competent authorities, such as governments, the World Trade Organization (WTO) and WIPO, that a second use is more than a mere discovery and represents innovation with industrial applicability, which merits full protection provided that it fulfils the statutory criteria for patentability, such as novelty and inventive step.

4. The work on the patent system in Europe

BACKGROUND | In Europe, the lack of a unitary title and the absence of an integrated, specialized and unified jurisdiction for patent-related disputes have for many years been subject matter for discussion between the European Commission, EU Member States and stakeholders. Finally, agreement was reached for those two issues to be dealt with as a package comprising an EU Regulation on a European patent with unitary effect (Unitary Patent; UP Regulation), an EU Regulation on the translation arrangements for a Unitary Patent (UPTA Regulation) and an Agreement on a European Union Patents Court (Unified Patent Court (UPC) Agreement). Unitary effect means that the Unitary Patent shall provide uniform protection and have equal effect in all the states participating in the Unitary Patent system (UP Member States).

However, language – a politically sensitive issue – turned out to be the key problem. As no agreement between all the EU Member States could be reached on the translation arrangements, the EU Council decided in March 2011 that the UP Regulation and the UPTA Regulation should be handled under a so-called enhanced cooperation procedure provided in the EU Treaties. Of the (then) 27 EU Member States, only Italy and Spain did not join this Enhanced Cooperation and brought an action against this procedure to the Court of Justice of the European Union (CJEU), which was dismissed in April 2013. Spain launched two further actions, which also were dismissed by the CJEU. Italy has in the meantime decided to join the UP Regulation and, thus, the unitary patent system.

CURRENT LANDSCAPE | In December 2012, the European Parliament voted positively on the EU Council's compromise proposals for the two draft regulations (Unitary Patent and its Language Arrangements). The regulations entered into force on 20 January 2013, but they will only apply from the date of entry into force of the UPC Agreement.

The UPC Agreement needs to be ratified by at least 13 states – including France, Germany and the United Kingdom – to enter into force. As of March 2017 twelve signatories – including France – have ratified the Agreement. Despite the UK's decision to leave the European Union, the UK government indicated in November 2016 that preparations for UK ratification of the UPC Agreement would continue. The Court is expected to start its operations in December 2017, but the time frame

⁴¹ “unless such known process results in a new product or employs at least one new reactant” (Section 3d).

for the entry into force of the system is still unclear as this is dependent on obtaining the necessary ratifications.

FUTURE PERSPECTIVES | Once the UP Regulation is applicable, there will be no separate granting procedure for a Unitary Patent. Rather, a UP can be obtained in a validation procedure after grant of a European Patent by the EPO according to the EPC. This validation will be similar to current individual validation of granted European Patents in EPC Member States. Conventional individual validation of the European Patent will still be available, in particular, for the EPC Member States not having access to the Unitary Patent. However, once validation of a UP is selected, conventional individual validation in a UP Member State will be excluded and vice versa. The Unitary Patent can only be limited, transferred, revoked or lapse with effect for all the UP Member States. A Unitary Patent may be licensed with effect for the whole or part of the territories of the UP Member States. Renewal fees shall be paid to the EPO.

The UPTA Regulation, once applicable, provides that during a transitional period – which will end no later than 12 years from the date of application of the Regulation – additional translations must be filed upon validation of the Unitary Patent. Where the language of the proceedings of the European Patent is French or German, a full translation of the specification into English must be provided, whereas where English is the language of the proceedings, a full translation of the specification into an official language of one of the UP Member States must be provided. These translations will be for information only and have no legal value.

The UPC Agreement, once in force, provides for a specialised patent court having exclusive jurisdiction concerning the infringement and validity of individually validated national parts of European Patents and of Unitary Patents. However, for a transitional period of at least seven years – from the date the Agreement enters into force – European Patents and pending European Patent applications may be exempted from this provision by filing a corresponding declaration (so-called opt out).

The UPC will comprise a largely decentralised Court of First Instance, a Court of Appeal and a Registry. The Court of First Instance will be composed of a central division – located in Paris with two sections in London and Munich – and several local and regional divisions in the UP Member States. The Court of Appeal will be located in Luxembourg. The central division of the Court of First Instance will be the exclusive forum for invalidity claims. However, invalidity may also be raised as a counterclaim in infringement proceedings before local or regional divisions.

The language of the proceedings before the local and regional divisions will be the official language at the seat of the division, but other choices of language will be available under certain conditions. The language before the central division will be the language of the proceedings of the European Patent. Appeals will normally be heard in the language used at first instance. All divisions will form an integral part of the UPC, with uniform procedures; the divisions will be specialised and distinct bodies, but will be linked to the CJEU and aimed at providing interpretation and application of EU law and transitional agreements.

Stakeholders, as in the past, will continue to welcome and follow the continued work in the EU on the UP system – in particular, the work of the UPC Preparatory Committee and the Administrative Council of the EPO on the implementation rules and the fee structure for the Unitary Patent – while emphasizing the need for cost-effectiveness.

ICC CONTRIBUTIONS | ICC will continue to follow the work on the detailed implementation rules and the fee structure for the Unitary Patent and the Unified Patent Court, and address potential issues raised by Brexit. As in the past, ICC will continue to file submissions on these topics with the competent instances.

5. Language considerations

BACKGROUND | Language is often a sensitive issue. From a strictly economic perspective, the benefit of a single language for patent procedures is self-evident, not only to intellectual property (IP) rightsholders but also to businesses seeking to enter foreign markets without infringing third party IP rights. However, the choice of language has important implications for national identity, culture and sovereignty. The political sensitivity of this issue is demonstrated by the debate that has been taking place for many years over the European Commission's proposal for a unitary patent regime in the EU.

CURRENT LANDSCAPE | At present, many countries allow the filing of patent applications using documents in a language other than an official language of the filing office. While typically a translation into the respective official language has to be provided within certain time limits, this option has greatly facilitated the handling of filings for applicants.

A further advance made for IP rightsholders in Europe was the Agreement on the Application of Article 65 on the Grant of European Patents (the London Agreement) which entered into force in 2008. This reduced the translation requirements for granted European Patents upon their validation in the individual Member States of the European Patent Convention. While the contracting states with an official language that is also an official language of the European Patent Office – including France, Germany and the United Kingdom – have now completely waived translation requirements for validation, the other contracting states require translations of the claims into their official language and translation of the specifications into another official language of the EPO (English in most cases). The London Agreement, however, reserves the right for its contracting states to require translation of the full specification in the context of patent litigation. This Agreement can be considered to be a milestone in considerably reducing validation costs for European Patents.

The progress in the development of machine translation tools made available, among others, by patent offices in Europe (EPO), Japan (JPO), Korea (KIPO) and China (SIPO), as well as by WIPO, has brought along several advantages. Machine translation facilitates fast and comparatively low-cost first-sight analysis of foreign language patent documents, either for prior art assessment or preventive infringement assessment of third party patents, the latter being a key issue for the market entry in countries with strong patent activity. Furthermore, machine translation promotes worksharing among patent offices and helps improve examination quality.

FUTURE PERSPECTIVES | The ongoing development of more powerful machine translation tools will further promote easy and low-cost access to comprehensive patent information, which may gradually reduce the significance of the language issue in the future. Patent offices, such as the world's five largest IP offices (the IP5), will continue to actively drive this process, as the linguistic *corpus* of bi- or even multilingual exact translations available at these patent offices – e.g. from the translations of priority documents, etc. – is a highly valuable basis for achieving further progress.

ICC CONTRIBUTIONS | ICC will continue to encourage initiatives aimed at reducing translation costs in patent prosecution and enforcement while preserving legal certainty for stakeholders involved. Furthermore, as in the past (see ICC paper *The Need for Further Accessions to the London Agreement* of June 2009), ICC will encourage governments who have not yet done so to join the London Agreement as soon as possible.

II. DESIGNS

BACKGROUND | Design laws purport to protect the specific outward appearance of a product. Designs have been a protected intellectual property (IP) right for a long time and were acknowledged as such in the 1886 Paris Convention. The 1925 Hague System – last updated by the 1999 Geneva Act – set up a centralised filing system through the World Intellectual Property Organization (WIPO) for the contracting parties (66 countries as of February 2017), including the European Union (EU) and the Organisation Africaine de la Propriété Intellectuelle (OAPI). Interest in the Hague System has been growing, especially since 2014, further to the adhesion of Cambodia, Japan, North Korea, South Korea, Turkmenistan and the US. The next countries expected to join are China, Canada, Israel and the United Kingdom.

With the increasing success of design filings, the need for harmonisation of substantive laws on designs becomes an important concern. Indeed, national differences in substantive rules – such as criteria, scope and duration of protection, the possibility of coexistence with other forms of protection such as copyright and trademarks, the tests for and effective remedies against infringement – make it difficult for design owners to obtain effective international protection.

CURRENT LANDSCAPE | There is a high disparity of design regimes at the international level – the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) devotes only two articles, 25 and 26, to the protection of industrial designs. They set the principle of a minimum standard of protection for new or original designs, which should be protected for at least 10 years against commercial manufacture and sale of products reproducing the protected design that has been copied.

Today, national design laws differ widely from one country to another on many aspects, such as:

- Examination or absence of examination of the novelty/originality criteria at registration stage.
- Term of protection, which varies from 10 years to 15 to 25 years. For instance in the EU it is 5 years renewable 5 times.
- Protection afforded to the whole, or parts, of a product – e.g. the proposed 4th amendment to Chinese patent law explicitly allows protection for partial designs, to become effective in 2017.
- Coexistence of different design regimes – design patents (China, US), industrial designs and designs – which are not always clearly circumscribed.
- The interaction between design protection and other forms of protection such as copyright, trademarks, patents and utility models, and trade dress. Most countries acknowledge cumulative protection, subject in principle to fulfilling the requirements for each IP right, with possible restrictions such as expiry of design protection entailing expiry of copyright protection.
- Criteria for assessment of validity and infringement – such as individual character, functionality and multiplicity of forms, visibility requirement, overall impression, the viewpoint of the reference person (the so-called informed user in the EU), the impact of aesthetic features and decoration, which are all subjective concepts whose interpretation varies from country to country.

Furthermore, the concerns and stakes involved in the protection of designs are highly dependent on the features of the relevant industry sector. For instance, the automobile industry faces the technical function hurdle and antitrust objections to design protection for spare parts, while the mobile device

industry has been drawn into battles over design protection for minimal geometric shapes for mobile phones and digital tablets.

The path to harmonization of design law: Efforts are currently being made to conclude a design law treaty at WIPO with the aim of simplifying and standardising the registration of designs, a move generally supported by high, middle and low-income countries alike.

The current draft covers registration-related formalities but not substantial issues. The main proposed changes to the design system are rather complex and relate to the methods and number of representations of a design, the number of designs in a single application, a grace period of 6-12 months from public disclosure, a secrecy period after filing, and the international standardisation of information to submit in a design application.

Although the draft design law treaty has garnered the general support of all delegations at WIPO, the convening of a diplomatic conference in 2017 remains subject to the resolution of two pending issues:

- Whether technical assistance should be in a provision in the treaty or in a resolution in annex.
- A November 2014 proposal by the African group at WIPO for a requirement of disclosure in design applications using or based on genetic resources, their derivatives and the associated traditional knowledge.

Further to the emergence of new technological designs and to the request of some Member States, the WIPO Standing Committee on the Law of Trademarks, Industrial Designs and Geographical Indications (SCT) has prepared a compilation of responses to a questionnaire circulated in 2016 on Graphical User Interfaces (GUIs), icons and typeface/type font designs, to assess the current terms of protection of these designs on a country-by-country basis. The European Community Design regime, which provides for a unitary title throughout the EU, is a successful example of regional harmonisation. In addition to the 1998 Design Directive which substantially harmonised national design laws of the EU Member States, the subsequent 2001 Design Regulation established a Community registered design right lasting up to 25 years, having the European Union Intellectual Property Office (EUIPO) as the receiving office for applications. The same Regulation also established a Community unregistered design right that arises automatically upon first publication of the design in the EU and lasts for three years.

A design owner seeking protection at EU level for a design that is new and has an individual character, may thus opt for a registered right – which provides full-fledged exclusive rights on the design – or for an unregistered three-year right which arises automatically from the first disclosure in the EU but only grants protection against copying (defence of independent creation). The scope of protection for both types of rights is identical and benefits any design that produces a different overall impression on the informed user. Since 2010, the Court of Justice of the European Union (CJEU) has been asked to clarify the meaning of several concepts in the Community design right, such as product at issue, degree of freedom of the designer, informed user and overall impression; but has not addressed controversial points such as the impact of the existing design corpus on the assessment of the individual character of a Community design.

Lastly, both the Directive and the Regulation allow the design right to overlap with national copyright and other forms of protection. This is important considering that, prior to the Directive, the interaction between copyright and design right was subject to a patchwork of regimes.⁴² The CJEU has held that

⁴² France, with its *unité de l'art* theory allowed full cumulation; certain member states, like Germany, allowed partial cumulation and others, like Italy and its *scindibilità* principle, prohibited cumulation.

Member States cannot enact legislation that has the effect of nullifying the cumulative copyright protection provided in the Directive 98/71 on the Legal Protection of Designs.⁴³

The improvement of tools available to ease filings and searches of designs: Progress has been made on several projects conducted by WIPO: (i) the opening of a new e-filing platform (introducing WIPO user accounts, automatic checking of images, an integrated fee calculator and credit card payment); (ii) the creation of a Hague Portfolio Manager (enabling access to data uploaded to the user account and interaction with the International Bureau); and (iii) the publication of the 11th Locarno classification, last amended in January 2017 (LOC 11).

The Locarno classification has 32 classes and 219 sub-classes, covering 5,167 indications of products classified, first according to their purpose and then according to the object that they represent. The current system is not fully satisfactory because it is difficult to identify designs similar or identical in another product range, which is a problem because, in many states, the scope of protection extends to all products having a similar appearance, including those belonging to another product range. EUIPO's EuroLocarno classification tool, which is based on the Locarno Classification and uses the same classes and subclasses, contains the alphabetical list of products of the Locarno Classification but also a large number of additional product terms.

A pilot group has been attempting for some time to improve the search possibilities by creating a complementary index to take into account visual features, without setting aside other indexing systems for designs. The Locarno Pilot Group, with EUIPO's Cooperation Fund, has recently selected two design projects: the development of a software tool to search images on relevant databases; and DesignView, a portal for registered design information from national offices, EUIPO and WIPO.

In 2014, EUIPO started a convergence programme on designs, which seeks to set guidelines for the graphical representation of designs for registration purposes (CP6) and to create a database of harmonised product indications (CP7). The CP6 work programme was completed in 2016 and a common publication on graphical representation of designs was released. The work of CP7 on the creation of a common harmonised product indication database and harmonised practice was mostly completed in 2016, with implementation scheduled for 2017.

FUTURE PERSPECTIVES | The importance of design protection has attracted the attention of lawmakers and has gained wide recognition by professionals and consumers, notably as a result of an increased level of design litigation, some of it involving well-known consumer products (Apple's iPhone or Converse's All Star shoes for instance).

From a regulatory standpoint, the adoption of the WIPO Design Law Treaty is a priority objective, but the convening of a diplomatic conference for its adoption is dependent on the two contentious issues referred to above.

At a national level, countries such as Canada, Germany, Israel, Malaysia and the UK have lately reformed their legislation on designs. Yet, the harmonisation of the basics of design protection remains a challenge because national approaches vary on the scope of protection and weigh differently various factors such as functionality, which is crucial as it can exclude from protection a design solely dictated by function.

From a business perspective, the range of items eligible for design protection is opening up in some countries. This is the case for Graphical User Interfaces (GUIs) – such as static or animated screen

⁴³ See Article 17 of the Directive; see C-168/09 Flos SpA v Semeraro Casa & Famiglia SpA.

icons or visual effects for smartphones or websites – in China, where protection of partial designs has been recently admitted, thereby facilitating design patent protection for GUIs.

In 2016, a sequel of the Apple v Samsung long-running patent litigation led the US Supreme Court to decide a critical issue regarding the scope of protection of design patents. In particular, the Supreme Court had to determine whether a product infringing only some protected design features should entail damages equal to the whole of the profits generated by the infringing product or solely those profits attributable to the infringed component. The Supreme Court, which had not heard a design case in more than 100 years, interpreted an old provision of federal law providing that the infringer of a design patent on an “article of manufacture” is liable for the total profits. It held that the term “article of manufacture” is broad enough to embrace both a product sold to a consumer and a component of that product, whether sold separately or not. The Supreme Court returned the case to the Federal Circuit without further specific guidance on computation of damages for design infringement of elements of a multipart product. For this reason, close attention will be paid to the future assessment made by the Federal Circuit.

The most important long-term factor impacting designs in the coming years will likely be the spread of 3D printing, which concerns designs on two levels. First, a 3D printer prints a real object upon receiving instructions to execute a Computer-Aided Design (CAD) file of said product created with a 3D modelling software or from a 3D scan. Second, the 3D printer manufactures the product by depositing materials layer by layer – hence the term “additive manufacturing” which, however, is no longer the sole 3D printing technique – to obtain a product intended to be the exact replica of the original 3D model as contained in the CAD file. Designs are, therefore, the matrix element of the 3D printing process as well as the resulting embodiment in a final 3D printed product.

3D printing technology is being used in many manufacturing processes, ranging from rapid prototyping to industrial production, especially in aeronautics and automotive sectors. It is affecting design processes along the entire value chain in all fields, from industries like jewellery-making to sizeable sectors like housing construction, as well as in design-driven sectors like architecture, artistic activities and entertainment.

The design-related issues raised by 3D printing include:

- The potential scale of infringement resulting from reproductions and/or customisation of consumer products by a multitude of individual persons.
- The authorship of designs used in 3D printing: The status of CAD/scan files and of derivative designs issued from mixing parts of several designs is key to understanding at which point the author of the initial design lost control of the authorship of subsequent versions of the design, and whether this can be remedied, e.g. through licensing. Identifying the IP rightsholder in a CAD file is also not always easy, as many of these files are collectively created and a large proportion of them come from open source communities and are shared and modified accordingly.
- The broadening possibilities for design licensing to which design owners will have to adapt, as partnerships develop between service providers, manufacturers of consumer 3D printers and companies holding portfolios of designs, such as toy companies.

Overall, design protection worldwide remains a delicate strategy, and the complexity and uncertainty surrounding the enforceability of protected designs is not satisfactory. However, this should not slow the rising trend for design filings, as most businesses do understand the importance of design protection, preferably obtained at an affordable price and in a reasonable time. However, filing

poor quality or bad faith design registrations does not represent a valid IP strategy and will usually lead to litigation. The challenge facing design protection is for it to become better understood as a business tool in its own right, with clear and enforceable features that courts will also be able to appraise with sufficient expertise. This entails an improved assessment of design rights by all concerned actors⁴⁴ and more coherent substantive laws on designs to strengthen cross-border protection and enforcement.

III. COPYRIGHT

BACKGROUND | The protection of copyright and related rights takes place within a framework of complex legal, economic and social issues. New ways of facilitating inexpensive and virtually instantaneous reproduction, distribution, performance, and display of works and other subject matter have created great opportunities and challenges for rightsholders, distributors and consumers. New technology has increased opportunities for a broad number of players (new and traditional), ranging from commercial content providers – e.g. producers and publishers of copyrighted material – to the IT, telecommunication and consumer electronic industries, as well as private persons, to name a few. The evolution of digital networks in general, and digital commerce and communications in particular, continues to increase the ways in which creative works and information can be used and experienced. This raises the need for copyright and related rights protection and licensing of such rights to respond to the new challenges and opportunities raised by digital distribution methods.

CURRENT LANDSCAPE | Important contributions to the framework at the international level are the 1996 World Intellectual Property Organization (WIPO) Treaties on Copyright (WCT) and on Performances and Phonograms (WPPT) (collectively the WIPO Internet Treaties), which both entered into force in 2002 and have 95 contracting parties. A number of additional countries have implemented provisions of the treaties without ratifying them. However, many countries have not yet fully implemented these treaties. In addition to the WIPO Internet Treaties, WIPO is the forum for discussions on updating the protection for copyright and certain categories of related rights as well as for discussions regarding exceptions and limitations. In June 2012, the WIPO Beijing Treaty on Audiovisual Performers (BTAP) was successfully concluded, updating the rights of audiovisual performers for the digital environment. In June 2013, the WIPO Marrakesh Treaty was successfully concluded, setting forth agreement on certain limitations and exceptions for the benefit of the blind, visually impaired, and otherwise print disabled.

FUTURE PERSPECTIVES | The economic contribution of copyright-dependent industries is significant, and often not fully credited. It is important that national decision-makers and opinion leaders increase their awareness of the economic importance of copyright, and the broad set of industries that depend on its protection and sufficient licensing possibilities of their rights for their viability. Consequently, WIPO continues working with member governments from each region of the world to analyse the impact of copyright-dependent industries on their respective national economies.

To fully exploit the possibilities of the digital revolution to the benefit of all parties while respecting underlying rights to copyright, business will intensify its work towards the common interest of promoting the protection of copyright and legal offers of protected goods/works in digital commerce.

Business should make use of all opportunities available to communicate its concerns to lawmakers to provide for a legal framework that encourages creativity in the information society. The implementation of the WIPO Internet Treaties – which take into account the legitimate interests of all stakeholders

⁴⁴ WIPO, for example, launched in 2014 a Design Pilot Project in Morocco and Argentina focusing on helping SMEs develop design-intensive business strategies.

involved while fostering creativity and investment in the relevant industry sectors – should be encouraged and monitored to ensure that the stated goals are fulfilled.

Business should continue to seek the appropriate application of existing copyright legislation to enforce the rights granted to rightsholders, while taking into consideration the eligible interests of service providers. At the same time, business should seek consensus on how copyright enforcement and licensing for legal offers can be made more efficient and effective and less costly in the face of new forms of infringement, in compliance with the WIPO Internet Treaties, under such legislation as the US's Digital Millennium Copyright Act or the European Union (EU)'s Copyright and E-Commerce Directives, or other multilateral agreements. Continued research at national and international levels to identify the contribution of copyright-related activities to the national and global economies would be welcome.

Governments should update copyright protection in substance by implementing the WIPO Internet Treaties and – in terms of well-balanced enforcement mechanisms – by at a minimum implementing the terms of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). The goal must be to establish a balanced and effective framework of accountability that respects international obligations, provides incentives for increased inter-industry cooperation to deter and respond to infringement, promotes responsible business practices, does not impose unreasonable burdens on intermediaries, fosters legal offers by promoting licensing structures for such offers and preserves an appropriate role for courts.

Any legislation that deals with the applicability of copyright infringement liability rules should examine carefully how these rules apply to all stakeholders in the digital networked environment, as part of ensuring the overall effectiveness of the copyright protection framework.

Any framework that provides for limitations on liability for service providers should be restricted to damages and other monetary relief. Injunctive relief and other forms of equitable relief should be available, subject to the evolving laws governing such relief.

1. Moral rights

BACKGROUND | Moral rights entitle authors to prevent use without attribution or distortion of their work, and are established at the international level in the Berne Convention⁴⁵. Moral rights are independent of economic rights.

CURRENT LANDSCAPE | Creators and performing artists are seeking reassurances that their moral rights are respected, especially by third parties, and that their works and performances are not unduly manipulated in the digital-networked environment. The Beijing Treaty on Audiovisual Performances (BTAP) included an obligation on signatory countries to protect the moral rights of audiovisual performers.⁴⁶

FUTURE PERSPECTIVES | Business is working towards practical rules that allow for the efficient exploitation of works according to customary business practices, including the creation of derivative works, which will ultimately benefit producers, performers and authors.

⁴⁵ Berne Convention for the Protection of Literary and Artistic Works; see Article 6bis.

⁴⁶ See Article 5.

Governments should take a reasonable approach to the issue of moral rights in a way that would prevent, in particular, the distortion of works and performances by third parties, while not undercutting the economic foundation and customary practices of the industry upon whose success both performers and authors depend, as well as the new opportunities for innovative licensing of adaptations of works which have arisen in some industries.

2. Protection of audiovisual performers

BACKGROUND | Audiovisual performers have been seeking an update of their rights at an international level since negotiations began for the WIPO Internet Treaties.

CURRENT LANDSCAPE | The Beijing Treaty on Audiovisual Performances (BTAP) was concluded in June 2012 and has been signed by 80 countries, providing actors and performers in audiovisual works with minimum economic and moral rights in their performances.

FUTURE PERSPECTIVES | The BTAP will enter into force three months after 30 countries have deposited their instruments of ratification or accession. With increased ratification/accession, the BTAP is well positioned to solidify the existing international legal protective framework for audiovisual performers. Business actively participated in the negotiations leading up to the conclusion of the BTAP. Ratification will allow for the orderly exploitation of audiovisual productions to the benefit of all parties involved in creating and distributing such works. Governments should ratify and implement the BTAP, recognising the particular needs of filmmaking and distribution and the huge investments involved.

3. Access to published works for persons who are blind, visually impaired or otherwise print disabled

BACKGROUND | In an effort to increase the availability of published materials in formats accessible to the blind, visually impaired or otherwise print disabled, WIPO member states adopted in June 2013 the Marrakesh Treaty to Facilitate Access to Published Works for Persons who are Blind, Visually Impaired or otherwise Print Disabled⁴⁷ to increase access and enhance efficient cooperation among member states. The goal was to encourage harmonised laws and efficient cross-border exchanges of protected works, while taking into account the impact on rightsholders.

CURRENT LANDSCAPE | The Marrakesh Treaty entered into force on 30 September 2016 and has 26 contracting parties (as of February 2017). The treaty requires contracting parties to adopt limitations and exceptions to national copyright protection for the reproduction, distribution and making available of published works in accessible formats. The treaty harmonises these limitations and exceptions across borders to allow organisations serving the blind, visually impaired or print disabled to exchange published works. To prevent misuse, cross-border exchange is limited to special cases that do not unreasonably prejudice rightsholders' interests nor interfere with the normal exploitation of published works.

FUTURE PERSPECTIVES | Several countries are taking initiatives to implement the Marrakesh Treaty at the national level, and ratifications and accessions to the treaty have continued since its entry into force.

⁴⁷ See www.wipo.int/meetings/en/doc_details.jsp?doc_id=241683.

4. Protection of broadcasters

BACKGROUND | Broadcasters have long sought an update of their rights – currently embodied at the international level in the Rome Convention – in response to market changes and technological developments. Discussions and proposals for a Broadcasting Rights Treaty have been ongoing at WIPO for a number of years.

CURRENT LANDSCAPE | While broad agreement exists on the need to update the rights of broadcasters, the WIPO expert committee continues to regularly discuss proposed treaty language, including with regard to the objectives, specific scope and object of protection.

FUTURE PERSPECTIVES | The issue remains on the WIPO expert committee's standing agenda with a view to convening a diplomatic conference only after reaching agreement on the three issues mentioned. Business is participating in ongoing discussions of potential updates to broadcasters' rights. Governments, through their representation at WIPO, are engaged in ongoing discussions regarding recognition and protection at the international level of updated rights of broadcasters in their broadcasts.

5. Orphan works

BACKGROUND | The issue of “orphan works” describes the situation where the owner of a copyrighted work cannot be identified and located by someone who wishes to make use of the work in a manner that requires permission of the copyright owner. The inability to identify and locate a copyright owner may inhibit the use of such work where copyright law requires permission from the owner for such use, since the prospective user may not wish to proceed with the use in the absence of permission from the owner, given the risk of potential copyright liability.

CURRENT LANDSCAPE | Several jurisdictions, including Canada, the UK and the EU, have examined the issue of orphan works and enacted certain legislative solutions that attempt to balance the interests of the prospective user and the unidentified owner in a way that the orphan status of the work does not constitute a bar to its further use. The US has also examined this issue but has not enacted legislation. On their side, businesses have developed copyright information registries and rightsholder databases to facilitate transactions between rightsholders and prospective users.

A uniform approach has not emerged, with countries choosing to follow either an approach that involves pre-clearance and licensing of such works, or one that deals with the limitation of certain remedies in the event that a rightsholder is identified. Canada and the UK follow the former approach, providing solutions that rely on the granting of non-exclusive licences, with a fee paid to and held by the authorising body until such time as the rightsholder appears. Whatever the approach, prospective users are required to show they have conducted a “diligent search” to identify and locate the owner.

While the US has not enacted legislation, the US Copyright Office in June 2015 supported a legislative framework that would limit remedies available to resurfaced owners of orphan works if the user of the orphan works could show that it had, prior to use, performed a good faith, diligent search to identify and locate the owner without success. This approach was designed to be a defence to a claim of copyright infringement, and its application would, therefore, be dependent on the factual circumstances of particular instances.

In October 2012, the EU approved a directive dealing with orphan works which is applicable only to certain types of works: (i) books, articles and other writings; (ii) certain audiovisual works contained in

the collections of film heritage institutions; and (iii) cinematographic works produced by public service broadcast organizations before 31 December 2002, all of which must be first published or broadcast in a member state. The Directive 2012/28/EU provides for member state legislation to enable the use of orphan works by libraries, educational establishments or museums, archives, film or audio heritage institutions and public service broadcasting organizations that are located in member states and that have public service missions. The exception requires a diligent search, and uses are subject to the three-step test and must be consistent with the public service mission of the relevant entity.

FUTURE PERSPECTIVES | Innovative database initiatives, including joint international undertakings, should help to address the issue of orphan works by facilitating greater location of rightsholders, and use of digital identifiers such as metadata should minimise creation of new orphan works. Several countries continue to explore solutions to address remaining orphan works where rightsholders cannot be identified.

IV. TRADEMARKS

The more intensive use of trademarks on the Internet for different purposes – including for e-commerce, by search engines and on social networks – has imposed new challenges for business. Whereas these new platforms provide trademark owners with faster and more efficient means to promote and advertise their trademarks, such owners have taken on new responsibilities and been faced with new challenges to protect their trademarks and enforce their rights.

While the Internet allows faster communication and can make a previously unknown trademark famous within a very short time frame, it can at the same time disrupt the reputation of a mark or a business within a couple of hours.

In this new scenario, trademark owners have been forced to change their marketing strategies, develop new ways of communicating with existing and potential consumers, invest more money and effort to monitor trademark infringement and – if this occurs – identify the infringer. If identification of trademark infringers in traditional commerce – i.e., in the real world – has always been difficult, it has become even more challenging to track them in the virtual world and on different Internet platforms.

These emerging challenges and developments have raised new topics for discussion among governments, legislators and stakeholders. Some of the most relevant ones are mentioned below.

1. Harmonisation and streamlining of trademark rules and procedures

BACKGROUND | There is no doubt that the harmonisation of rules and procedures makes trademark protection more simple and efficient, less costly and more easily manageable by business.

CURRENT LANDSCAPE | A very important tool for the global protection of trademarks is the Madrid Agreement (1891, amended several times), and particularly the Madrid Protocol (1989), which allows protection of a mark in a large number of countries by obtaining an international registration which has effect in each of the designated countries. The main advantage of the Madrid system is the ability to file a single trademark application with WIPO instead of filing a separate application and following domestic procedural rules in each country where protection is sought. Other advantages include: filing in a single language (English, French or Spanish); an online facility for central payment of renewal fees for international registrations, using a credit card or a WIPO account; a single application for

recording a change of name or address, which can be extended to all the designated countries; and a single renewal date and request. In view of these advantages, many countries have joined the Madrid system – which in March 2017 counted 98 members – and many others are expected to join in the near future.

In the procedural area, the Singapore Treaty on the Law of Trademarks (2006) built on the Trademark Law Treaty (1994) and enlarged its scope. As of March 2017, the Trademark Law Treaty and the Singapore Treaty had 54 and 46 contracting parties respectively.

Another initiative towards harmonisation and improvement of trademark procedures is TM5, a network consisting of the five main trademark Offices: the European Union Intellectual Property Office (EUIPO), JPO (Japan), KIPO (Korea), the State Administration for Industry and Commerce of the People's Republic of China (SAIC), and USPTO (US). TM5 aims to promote collaboration between the offices and to improve their trademark systems through the exchange of information and experiences.

FUTURE PERSPECTIVES | A successful example of harmonisation of trademark rules and procedures is the European Union Trademark system that, after 20 years, continues to be a vital tool for businesses worldwide. This system was recently reformed and a new regulation – Regulation No. 2015/2424 – entered into force on 23 March 2016. The new regulation introduces a number of changes which impact EU trademark holders and creates a more modern and streamlined system. As part of the reform, a new Trademark Directive (Directive 2015/2436) also came into force. The implementation of the new Directive on a national level will still require some time, since national lawmakers have three years, until 2019, to implement the Directive's changes (for some other specific changes within seven years, until 2023). The goal of the reform was to foster innovation and economic growth by making trademark registration systems all over the EU more accessible and efficient for businesses by reducing costs and complexity, and increasing speed, predictability and legal security. These adjustments dovetail with efforts to ensure coexistence and complementarity between the EU's and its member states' trademark systems.

2. Famous / well-known marks

BACKGROUND | Since well-known marks are especially vulnerable to abuse, it has long been recognised in the Paris Convention, and reaffirmed in TRIPS, that special protection is needed for such marks. However, enhanced protection through concepts broader than mere trademark infringement may be needed, e.g. through rules of unfair competition, dilution or indication of connection.

CURRENT LANDSCAPE | In 2006, the US enacted the Trademark Dilution Revision Act, according to which the owner of a famous mark may apply to the relevant court for an order prohibiting continuing or anticipated use likely to cause dilution by blurring or tarnishing of the famous mark, regardless of likely confusion or economic injury.

Countries like Argentina, Brazil, and Paraguay provide trademark owners, especially of well-known marks, with the possibility of enrolling their marks in a special, although sometimes informal, database used by the customs authorities to fight piracy.

Other countries, such as Japan, allow for a defensive registration for dissimilar goods or services of the well-known mark.

In China, trademark owners can request the Trademark Office, the Trademark Review and Adjudication Board (TRAB) or courts of law to recognise a mark as well-known under the principles of passive protection, necessity check and case-by-case recognition. The term “well-known mark” should not be used on goods, packages or containers of goods, or in advertising, exhibition or any other business activities. Violation of the non-publicity clause is subject to injunction and monetary penalties.

The WIPO Joint Recommendation Concerning Provisions on the Protection of Well-Known Marks, adopted in September 1999, provides welcome guidance to both trademark holders and competent authorities concerning the criteria for determining what constitutes a well-known mark. They operate as non-binding guidelines to the application of the Paris Convention and TRIPS. As the Recommendation does not provide guidance on specific implementation measures, national measures to implement the Recommendation and their legal effects vary from country to country and can range from establishing an official register (sometimes open only to domestic brands) to having informal lists maintained by the national authorities.

FUTURE PERSPECTIVES | There should be a continuous effort to protect well-known marks by means of adequate legislation and, above all, by combating parasitical behaviour and counterfeiting. The WIPO Joint Recommendation could be a helpful tool in any future discussions on establishing an international system for recording and recognising rights in well-known trademarks .

3. Searches

BACKGROUND | The lack of tools to make comprehensive, worldwide searches through the Internet for all forms of trademarks creates uncertainty for companies wishing to register their marks, as they are unable to verify if such marks are already registered by other organisations.

CURRENT LANDSCAPE | During the past years, the compilation by the European Union Intellectual Property Office (EUIPO) of an online dictionary of terms related to the classification set out in the Nice Agreement has been established and the number of cooperating IP offices have grown. This global classification tool – TMclass – includes access to dozens of national and regional IP offices, including EUIPO, OAPI and WIPO. TMclass is a free online tool based on the Nice Classification system that helps users correctly classify goods and services when filing a trademark. It allows users to search for terms in any of the 40 languages available. TMclass can also be used to verify lists of terms and to check if they are accepted in the participating IP offices. Additionally, the tool translates equivalent terms for goods and services into all available languages.

While the classification within the EU member states is harmonised, other IP offices’ classification is searchable on the TMclass site, in order for the applicant to be able to compare accepted terms. The IP offices of the ASEAN countries have also created a free similar online classification tool, ASEAN TMclass, in cooperation with EUIPO.

When searching for earlier trademarks, TMview, developed by EUIPO, is an important platform, covering 56 national and regional IP offices (including ARIPO, WIPO and EUIPO) as of March 2017. WIPO has launched its own ambitious and freely accessible project for global trademark searches, known as the Global Brand Database. The Global Brand Database includes trademarks, appellations of origin, emblems, international registrations under the Madrid system and links to the trademark databases of contracting parties.

However, lack of harmonised classification, clarity and precision may still lead not only to unreliable results in searches but also to mistakes in the examination of trademark availability on relative grounds.

FUTURE PERSPECTIVES | There is an increasing tendency for trademark databases to be integrated for searching purposes, facilitated by new technologies and the gradual modernization of IP offices worldwide. The participation of more countries in the Global Brand Database and TMview would be welcome, as these databases can be useful and cost-efficient tools, especially for companies with operations in multiple countries.

4. Restrictions on the use of trademarks on packaging

BACKGROUND | Packaging and labelling play an important role, together with brands, to identify the source or origin of products and provide critical information to consumers, particularly at the point of sale, including when sale takes place online. Product packaging typically contains brand names and logos, as well as information on the identity of the manufacturer or distributor, whereas labelling provides information on product contents, quality, quantity, etc..

Over the years, there has been an increasing tendency for government authorities of various countries to regulate the use of brands on labelling and packaging in a number of sectors and countries. These measures are being applied to a broad range of products and sectors in a growing number of countries around the world, often predicated on achieving specific public policy objectives.

CURRENT LANDSCAPE | Labelling and packaging measures can directly or indirectly restrict the use of branding elements or require an outright ban of trademarks and commercial denominations. Measures which specifically restrict the use of particular branding features can range from partial to total bans on the use of logos, brand names, designs, colours, images or words, and may proscribe the use of specific colours or font sizes. They can also include bans on trademarks or other distinguishing signs associated with certain types of products being used on other types of products. At the extreme end of the spectrum, some countries have introduced a total prohibition on the use of all branding elements except the trademark name in plain font (see section 4.1 below).

Other measures can indirectly restrict or obscure the use of branding features by requiring the inclusion of mandatory elements in a specified size and/or style which reduce the visibility or available space for branding. Examples are requirements for mandatory text to be disproportionately large or dominant in relation to the brand name – for the inclusion of specific and visually dominant design features – and for the mandatory display of warning notices, symbols or images which are disproportionately large or visually dominant in relation to the brand name and/or the overall space available for branding.

FUTURE PERSPECTIVES | Labelling and packaging regulation plays an important role in protecting the health and safety of consumers. However, reducing the ability of manufacturers to distinguish their products through the use of branding and to provide other product information has broad implications in a wide range of policy areas, which are governed by national regulation as well as a large web of different international agreements, standards, codes, principles and best practices. Unnecessarily restrictive measures broadly distort competition and can have negative consequences for consumer protection, innovation, intellectual property (IP) rights, and trade. Coordination among different government departments and a holistic approach are, therefore, crucial to ensure policy coherence, and also to avoid potential problems due to the multiplicity of different labelling and packaging measures on the same product. Regulatory approaches should be consistent with competition, trade and investment-facilitating principles and should not restrict trade, IP rights, competition or investment more than necessary to achieve a legitimate public policy objective.

As governments consider the pertinence of labelling and packaging measures, care should be taken to ensure their compatibility with relevant international agreements and standards. These include

multilateral agreements in the areas of international trade (e.g. World Trade Organization (WTO) Agreement, including Agreements on Technical Barriers to Trade and on the Application of Sanitary and Phytosanitary Measures), intellectual property (e.g. WTO TRIPS; WIPO treaties), food standards (e.g. WHO and FAO CODEX Alimentarius) and many others.

ICC CONTRIBUTIONS | The *ICC Discussion Paper on Labelling and Packaging Measures Impacting on Brand Assets* was published in 2017, providing information on global legislative initiatives and analysing their impact on IP rights, marketing, consumer protection, competition, trade and innovation.

4.1 Plain packaging

BACKGROUND | Over the years, health authorities of several countries have gradually limited the use of brands on tobacco packaging by obliging companies to affix graphic and/or text warnings and by restricting the use of colours, fonts and certain words, assuming that it is an important factor in the control of tobacco consumption. These restrictions have become harsher, and printed warnings have grown bigger to the point of occupying a large percentage of the surface area of tobacco packs.

Mandatory standardised packaging of tobacco (plain packaging) was adopted for the first time by Australia. The Australian Tobacco Plain Packaging Act 2011 (the TPP Act) prevents tobacco trademark owners from using their non-word trademarks in their entirety by imposing restrictions upon the colour, shape and finish of retail packaging for tobacco products and obliging companies to indicate their brand name (word mark) in a small standard font, without any logo or figurative elements. This means that tobacco trademarks – particularly for distinctive logos, pack front and trade dress and shape, and including those trademarks containing words, letters, numbers, designs, drawings, colours, etc. – can no longer be used on packs available to consumers in Australia.

CURRENT LANDSCAPE | Following the introduction of the TPP Act in Australia, France, Hungary, Ireland, New Zealand, Norway, Slovenia and the UK have also adopted plain packaging legislation. Other countries are also considering adopting plain packaging.

There is an ongoing dispute at the WTO. Cuba, the Dominican Republic, Honduras and Indonesia have presented complaints against the TPP Act, as they believe it breaches WTO rules. More than 35 countries have joined the dispute as third parties. Due to the complexity of the case the panel delayed its report and the ruling is expected to be issued during 2017, which could possibly be appealed to the WTO Appellate Body.

Part III of the World Health Organization Framework Convention on Tobacco Control (WHO FCTC) – in force since 2005 and signed by 180 countries – contains provisions regarding tobacco packaging but does not require the parties to the FCTC to adopt plain packaging. Plain packaging is mentioned in paragraph 46 of the non-binding guidelines concerning Article 11 (Parties “should consider” such measures).

The implications of plain packaging on the WTO Agreement on Technical Barriers to Trade (TBT), TRIPS and Paris Convention obligations raise fundamental questions on how measures intended to protect public health should function alongside trademark systems. Issues under discussion include: the nature of trademark rights and whether these are positive or negative rights; if the product on which the mark used (tobacco) is actually a legal product, whether moral and public order principles can be applied; and to what extent the public interest should prevail over IP rights.

FUTURE PERSPECTIVES | There are other countries considering introducing plain packaging legislation. Some countries are prudently waiting to observe the possible consequences and actual

effects of the TPP Act as well as the outcome of the ongoing disputes at the WTO, including a possible appeal to the WTO Appellate Body. There is also a growing concern that plain packaging for cigarettes will create a precedent for extending this policy to other industries and other brand owners.

5. Non-traditional marks

BACKGROUND | Non-traditional or non-conventional marks are those that differ from the usual concept of a mark, that is, the word, design, logo, letter or combination of letters and signs that distinguishes products and services of different undertakings.

The development and globalisation of commerce has increased competition among businesses and, for this reason, many have tried to make their products or services more sophisticated, seeking creative ways of communicating their message to the public, attracting consumers' attention and distinguishing their offerings from those of their competitors. This phenomenon has led to changes in the appearance of marks, the shape and packaging of products and the way services are offered. This is easily perceived by comparing the evolution of the aesthetic shape of perfume flasks and food recipients, for example. Even services have had to be adapted to the new reality, and the best examples are delivery services, courier services and electronic commerce.

Marks themselves have also evolved as a result of modern communication tools and information technologies such as mobile devices, websites, apps, electronic messaging and electronic cards. Originally conceived as a name on a label, marks have changed dramatically over the decades and are now presented in the most varied ways with regard to form and styling: sound, olfactory, taste and tactile marks; tri-dimensional marks; holograms; movement or animated marks; colour marks; position marks and gesture marks.

In spite of the more recent developments, non-traditional marks are not new. One of the first registrations dates back to the 1950s, when the National Broadcasting Company registered the sound of chimes in the US for broadcasting radio programmes.

CURRENT LANDSCAPE | Non-conventional marks exist worldwide, but not all countries allow them to be registered for the following simple reasons: the legal definition of a mark varies from country to country and legislation to legislation and, in many cases, the definition does not fit or embody the concept of a non-conventional mark.

Another key issue that may hinder the registration of non-conventional signs is the need to find adequate ways of representing and docketing them, without excessively burdening national offices and allowing the public in general to identify them.

Article 15 of TRIPS establishes that "members may require, as a condition of registration, that signs be visually perceptible", so member countries have the choice – but not the obligation – of including the visual perception of a sign as a requirement for registration in their national laws. In this regard, it is also provided for in Article 15 of TRIPS that where signs are not inherently capable of distinguishing the relevant goods or services, members may make registrability depend on distinctiveness acquired through use.

In countries where the law does not require that a sign must be visually perceptible to be registered as a mark, non-traditional marks are usually accepted. In jurisdictions where the law only accepts the registration of signs that can be represented graphically, registering some types of non-traditional signs, such as olfactory marks, can pose severe challenges. Whenever the possibility of registration

does not exist, conflicts involving non-traditional marks may often be solved through unfair competition rules.

The main problem with respect to non-traditional marks is the lack of widespread standards and uniform criteria for their protection and representation, the lack of technological means to register and store such marks, and the difficulty in analysing and solving conflicts between such signs and producing evidence of use in some cases.

A welcome development was the deletion of the requirement of graphical representability for EU trademarks by the new European Union Trade Mark Regulation (EUTM), which entered into force in March 2016. The EUTM permits a sign to be represented in any appropriate form using generally available technology, and thus not necessarily graphic means, as long as the representation is clear, precise, self-contained, easily accessible, intelligible, durable and objective.

FUTURE PERSPECTIVES | Despite the above-mentioned difficulties, the number of registrations for non-traditional marks has grown and is expected to grow even more in many parts of the world. This is a result of new marketing strategies – which promote stronger interaction between marks and the public – and of legislative changes and case law that adopt a broader trademark concept or interpret existing concepts in a more comprehensive way so as to embody these unique types of marks.

V. DOMAIN NAMES

1. Evolution of the domain name landscape

BACKGROUND | The Internet is not one network, but a network of networks. To connect to the Internet, every device or object requires a unique identifier. These exist in two forms – a number, i.e. the Internet Protocol address (IP address), and, to make it easier to use, a domain name. Each IP address corresponds to a domain name which is made up of a set of characters or letters. The domain names are the Internet addresses of websites or email addresses. The Domain Name System (DNS) helps make the Internet more accessible by allowing users to type in a domain name instead of an IP address, e.g. 'www.belgium.be' rather than '193.191.245.244'.

Each domain name includes a top-level domain (TLD), i.e. the two or more letters that follow the dot. TLDs – also referred to as extensions – are grouped into two categories: generic top-level domain (gTLDs) such as .com, .mobi and .info, as well as two-letter country code top-level domains (ccTLDs) such as .us, .ca, .uk and .eu, identifying a country or territory.

A registry operator manages the TLD and maintains the registry database including the domain names registered therein. The Internet Corporation for Assigned Names and Numbers (ICANN), a not-for-profit public-benefit corporation established in California in 1998, oversees the DNS. ICANN's primary mission is to coordinate, at the highest level, the Internet's systems of unique identifiers globally, and, in particular, to ensure the stable and secure operation of the Internet's unique identifier system, which is the DNS.

Prior to ICANN, the functions of the Internet Assigned Numbers Authority (IANA), which technically coordinates the unique identifiers to manage the DNS, was managed by a United States (US) government agency. The privatization process of the DNS concluded on 1 October 2016, when the US government transitioned its historic stewardship role of the IANA functions to the global

multistakeholder community as represented by ICANN, headquartered in the US but with offices globally.

When a party wants to register a domain name in a gTLD, it enters into a registration agreement with an accredited domain name registrar or authorized reseller. For ccTLDs, the registry operator may allow direct registrations via the registry itself. It is the registrar's job to check the availability of a domain name with the relevant registry and then execute the registration transaction with the registry operator. The registration process has hardly changed over the past few decades.

CURRENT LANDSCAPE | The third and last round that introduced new gTLDs was approved in 2011 after several years of preparation. The goal was to hold a full-blown competition for gTLDs, with some exceptional protection mechanisms to protect legal rights, community interests, limited public interests, as well as applicants of existing or newly applied for TLDs challenging a gTLD string that is confusingly similar to an existing TLD or to another applied-for gTLD. This round generated 1,930 applicants for 1,409 unique strings, including 116 Internationalized Domain Names (IDNs), and resulted in an increased number of litigious proceedings related to protection mechanisms and to failures in ICANN's application policy. By December 2016, 584 applications were withdrawn and 1215 were delegated, i.e. activated within the domain name system. They exist next to the current 238 ccTLDs and 23 legacy gTLDs.

There are over 330 million registered domain names, of which 44.8% are registered in ccTLDs, 47% in legacy gTLDs (of which 42.8% in .com and .net), and only 8.2% in new gTLDs.⁴⁸

FUTURE PERSPECTIVES | ICANN has pointed to 2020 as the earliest realistic timeframe for the next round of gTLD applications. However, questions remain as to whether it will be a fourth round or a permanent window.

ICANN has launched a Rights Protection Mechanisms (RPMs) Review, which is intended to identify areas where additional policy development or implementation improvements might be beneficial. The RPMs Review includes evaluation of data as well as input about key protection mechanisms such as the Trademark Clearinghouse, Uniform Rapid Suspension system and Post-Delegation Dispute Resolution Procedures.

ICC CONTRIBUTIONS | ICC has developed an information booklet on the domain name system and the new gTLD program.⁴⁹ ICC is a member of the Business Constituency of the Generic Names Supporting Organization – a community within ICANN. ICC was asked to serve on the 30-member IANA Stewardship Transition Coordination Group (ICG) to represent broad business interests and has, in the past, made an informal contribution on key issues regarding the reform of ICANN's structures to take account of the impact of the new gTLD programme. ICC membership spans the diversity of the ICANN communities from ISPs, IP rightsholders, broad business interests as well as the registrars so its main organisational input focuses on governance of ICANN and where it sits in the wider context of Internet governance issues.

⁴⁸ Domain Name Industry Brief (Verisign), www.verisign.com/en_US/domain-names/dnib/index.xhtml; New gTLD Overview (nTLDStats), ntldstats.com/tld.

⁴⁹ See *Domain names and new generic top-level domains*, store.iccwbo.org/gtld.

2. Challenges for new gTLD registries and brand holders

BACKGROUND | Abusive domain name registrations and the anonymity that can be maintained on the Internet through the use of privacy services, proxy services and fake identities, make traditional mechanisms for resolving conflicts between trademark holders and domain name holders cumbersome. ICANN adopted the Uniform Domain Name Dispute Resolution Policy (UDRP) proposed by the World Intellectual Property Organization (WIPO), which is designed to discourage and efficiently resolve disputes over the abusive registration and use of trademarks as domain names under gTLDs at a global level. Since the adoption of the UDRP, many registries of ccTLDs and sponsored TLDs have adopted policies similar to the UDRP and implemented additional rights protection mechanisms.

CURRENT LANDSCAPE | Cybersquatting can be fought in court on the basis of existing trademark legislation or specific anti-cybersquatting laws, e.g. the US Anticybersquatting Consumer Protection Act of 1999. However, the vast majority of domain name disputes are handled through alternative dispute resolution (ADR), in accordance with the UDRP or UDRP-inspired policies for ccTLDs or certain gTLDs.

In ADR cases, rightsholders can obtain the transfer of the domain name, even if the domain name registration details are not accurate. For non-ADR disputes, the accessibility and accuracy of domain name registration details remain of significant concern to rightsholders. They can rely on information that is made available through WHOIS records, a database that includes current registrant contact details. Agreements between ICANN and both registries and registrars include provisions on the requirements for registration data and accessibility of this data. However, this does not prevent many WHOIS databases from containing inaccurate data or the use of proxy and privacy services that are often used to shield illegal activity on the Internet.

More recently introduced TLDs adopted additional rights protection mechanisms, such as eligibility requirements (e.g. .post) or sunrise phases during which trademark holders were able to pre-register or block domain names prior to the general availability of domain name registrations (e.g. .xxx).

FUTURE PERSPECTIVES | With the adoption of the New gTLD Program in 2012, ICANN, in close consultation with the trademark community, has introduced mandatory rights protection mechanisms that must be implemented as a minimum by all registry operators of new gTLDs. ICANN's UDRP must be observed by all new gTLD operators. In addition, ICANN has introduced the Trademark Clearinghouse (TMCH), the Uniform Rapid Suspension system (URS) and a Trademark Post-Delegation Dispute Resolution Procedure (PDDRP). These protection mechanisms work as follows:

- *Trademark Clearinghouse (TMCH)*: Trademark holders may register their trademarks in the Trademark Clearinghouse, which is a database of validated trademark information. The launch of every gTLD must be preceded by a Sunrise Period, during which a trademark holder registered in the TMCH database may register a domain name identical to his or her trademark. The Trademark Clearinghouse also sends notices to the trademark holder in the event of a third party applying for a domain name identical to his trademark. Likewise, the applicant receives a notice informing him or her of the potential conflict with the holder's rights.
- *Uniform Rapid Suspension system (URS)*: The URS complements the UDRP and provides an even faster and less expensive process for resolving clear-cut cases of infringement, but the only remedy available is a temporary suspension of an abusive domain name.

- *Trademark Post-Delegation Dispute Resolution Procedure (PDDRP)*: A rightsholder can bring a complaint under the PDDRP if he or she believes himself or herself to be harmed by the conduct of a registry operator which is actively engaging in or contributing to infringing behaviour.

Many brand owners are disappointed with the efficiency of these RPMs. Indeed, one example was the operator of .sucks which was charging a premium for brands registered in the Trademark Clearinghouse, which seemingly abused the Clearinghouse system.

Even though trademark holders registered more than 40,000 trademarks with the TMCH, it offers only limited protection against abusive registrations. First, it only covers domain name applications which are identical to the registered trademark. However, most of the abuse cases concern domain names which are confusingly similar but not identical, or which combine the trademark with a generic term. This renders the TMCH protection fruitless in most cases. Additionally, the TMCH only allows the registration of a domain name identical to the registered trademark and does not offer a suspension mechanism.

The URS is meant to be a complementary mechanism to the UDRP for cases of clear-cut trademark infringement. It is administered primarily by the National Arbitration Forum (FORUM), the Asian Domain Name Dispute Resolution Centre (ADNDRC), and by MFSD Srl. It is a quick and rather inexpensive procedure. UDRP filing fees start at around US\$1,350, while URS filing fees may start as low as US\$375; the UDRP procedure takes a couple of months to conclude, whereas the URS will take only 21 days or less. However, as the only remedy is a temporary suspension of the abusive domain name, the URS has been only of limited use to trademark holders.

As of January 2017, about 680 URS decisions had been issued. 87% of the decisions ruled in favour of the complainants, while in the remaining 13%, the registrant would maintain control of the domain. In a landmark case of 21 December 2016, a National Arbitration Forum (NAF) panellist rendered a decision suspending 474 domain names found to infringe trademarks.⁵⁰ So far, no Post-Delegation Dispute Resolution Procedure (PDDRP) case has been initiated.

With the introduction of the new gTLDs, the number of Uniform Domain Name Dispute Resolution Policy (UDRP) procedures has increased, even though the percentage of cases involving new gTLDs is still quite low, i.e. 10.5% of all WIPO UDRP cases in 2015.

In 2013, ICANN also adopted a new Registrar Accreditation Agreement that contains stricter rules for registrars to increase the accuracy of WHOIS records and regulate the use of privacy and proxy services. New gTLD operators are only allowed to license domain names through registrars (or their resellers) which comply with the terms and conditions of this most recent agreement.

⁵⁰ Ashley Furniture Industries v Fahri Hadikusuma, www.adrforum.com/domaindecisions/1703352D.htm .

VI. GEOGRAPHICAL INDICATIONS

BACKGROUND | The strategic importance of geographical indications (GIs) as a valuable marketing tool has become more evident with the escalation in demand for quality and typical products originating from a particular region.

Although a number of countries have developed effective legislation to protect GIs, there is still a lack of harmonisation. A single term can be protected in different ways depending on the country: as a collective mark, a certification mark, an appellation of origin (AO), an indication of source, or, broadly, as a GI. In some countries, the system and rules applicable to a GI vary in accordance with the type of product to be protected. In the European Union, for example, different Regulations deal with foodstuff, wines and spirits. In China, a *sui generis* system for goods, handicrafts and traditional Chinese medicines coexists with a trademark system and a *sui generis* system for agri-products.

In some cases, both trademarks and GIs can be used to protect terms indicating the geographic origin of products. However, producers are not usually aware of the advantages and specificities of the two types of rights.

Whereas trademark protection implies generally easier and more cost-efficient registration procedures, the GI system offers producer groups clear advantages, notably in the breadth of protection, where the link between the geographical name and the product relies on consumers' existing knowledge of agricultural, culinary or cultural traditions.

CURRENT LANDSCAPE | Discussions on a multilateral register for wine and spirits have been going on since 2001 under the Doha agenda, but little progress has been made since the first draft was produced in 2011 because WTO members remain divided as to the scope and substance of the negotiations. There have also been different positions as to whether this issue should be dealt with separately or jointly with two other issues, namely the possible extension of the higher level of GI protection for wines and spirits, currently provided in Article 23 of TRIPS, to other products, and the discussions about the relationship between The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) and the Convention on Biological Diversity (CBD).

The latest report of the TRIPS Council, circulated in December 2015, shows that the situation has not improved, that the divide on the reforms to adopt persists, and that discussions on the multilateral register do not seem to be a priority for WTO members at this moment.

On the other hand, there has been some progress with regard to the Lisbon Agreement⁵¹, originally adopted in 1958. After having been revised in 1967 and 1979, the Agreement was revised again to make it attractive for countries with all types of legal systems, resulting in the Geneva Act⁵² adopted in May 2015.

The most important innovations introduced by the Geneva Act are: the extension of international protection and registration so as to comprise not only Appellations of Origin (AOs) but also GIs; the permission that has been granted to international organisations to access the Lisbon system; the option for beneficiaries to file their GIs and AOs directly rather than solely through national authorities; safeguards for prior trademarks and personal names, denomination of plant varieties and animal breeds; safeguards against GIs or AOs becoming generic; and the possibility for a contracting party to charge an individual fee to cover the costs of examination of an international registration.

⁵¹ Lisbon Agreement for the Protection of Appellations of Origin and their International Registration.

⁵² Geneva Act of the Lisbon Agreement on Appellations of Origin and Geographical Indications.

The Geneva Act has been signed by 15 countries. It will however only enter into force three months after five eligible parties deposit their instruments of ratification or accession.

On other fronts, GIs holders continue to face problems, such as counterfeit goods – GI holders keep asking for better enforcement and protection of GIs – and the lack or weak protection of GIs in the domain names realm, particularly after the introduction of new generic top-level domains (gTLDs).⁵³

Although no specific criteria or *sui generis* objection procedure has been provided to protect GIs when they are used as gTLD strings, ICANN, as part of its new generic top-level domain programme, incorporated several dispute resolution procedures that gave rightsholders the opportunity to challenge the introduction or registration of new gTLD strings. For example, the Trademark Clearinghouse Guidelines provide that terms protected by statute or treaty, which may include GIs and designations of origin, benefit from the same protection as trademarks.

The procedures provided for in the Uniform Dispute Resolution Policy and in the Trademark Clearinghouse Guidelines generally require the complainant to provide evidence of their rights to the trademark. However, whereas panellists in domain names disputes admit that GIs are not by themselves a valid legal title to claim protection against gTLD abusive registrations, their consensus view is that some geographical terms can be protected under the UDRP. For that to happen, the complainant must show that it has rights over the term and that the term is being used as a distinctive sign for goods or services different to those that are described by or related to the geographical meaning of the term (secondary meaning). However, it has proven difficult for GIs holders that have not obtained a relevant trademark registration to show unregistered trademark rights over their geographical terms on the basis of secondary meaning.

Despite slow movement in other fronts, GIs continue to play an important role as part of bilateral and regional trade agreements signed worldwide. The most recent example is the Trans-Pacific Partnership (TPP), which contains a chapter on intellectual property, including a section dedicated to GIs. The GI section contains provisions, which go beyond TRIPS, on how countries should handle conflicts between trademarks and GIs and respect other member countries' GIs despite their different protection mechanisms.

Another initiative, still under negotiation, is the Transatlantic Trade and Investment Partnership (TTIP) between the United States and the European Union (EU), which also contains provisions on GIs. GI protection is a crucial issue for the EU. As the two parties have adopted different protection mechanisms for GIs, reaching consensus may prove difficult.

Due to the different treatment that GIs receive all over the world, there are no clear-cut guidelines for parties that seek protection for their traditional products, which means that local legislation needs to be verified.

FUTURE PERSPECTIVES | The need to improve the protection of goods and, eventually, services (with the exception of wine and spirits) through GIs is increasing, especially in developing countries as they see GIs as a means of adding value to their goods and services and of getting the economic and social benefits that result from it. In parallel, as the Internet and consequently domain names gain in importance each day, clearer rules would help GIs holders protect and enforce their rights more easily and effectively.

⁵³ See section B.V on Domain names.

ICC CONTRIBUTIONS | ICC has issued past statements in the context of WTO negotiations on GIs, and continues to participate in the proceedings of the WIPO Standing Committee on the Law of Trademarks, Industrial Designs and Geographical Indications.

VII. PLANT VARIETY RIGHTS (PVR)

BACKGROUND | According to Article 27(3)(b) of the TRIPS Agreement, all WTO members shall provide for the protection of plant varieties, either by patents, or by an effective *sui generis* system or by any combination thereof. IP systems around the world have opted for different solutions. In the majority of countries where IP protection is available for plant varieties a *sui generis* system has been followed. However there are some countries where plant varieties can be protected by a combination of patents and *sui generis* IP rights.⁵⁴ To date, the most common *sui generis* IP protection available for plant varieties is offered by the International Convention for the Protection of New Varieties of Plants (UPOV Convention). This *sui generis* IP protection is granted to plant varieties which are new, distinct, uniform and stable.

The first version of the UPOV Convention was adopted in 1961 and has been revised three times, in 1972, 1978 and 1991. Today, practically all UPOV members adhere either to the 1978 or to the 1991 version of the Convention.⁵⁵ The main difference between the two is that the earlier version provides a lower level of protection to the rightsholder:

- The 1978 Act does not oblige countries to protect all *genera* and species, meaning that breeders of some species do not have any protection.
- The protection offered by the 1978 Act covers only the production for purposes of commercial marketing, the offering for sale and the marketing of the propagating material of the protected variety; whereas the scope of protection offered by the 1991 Act covers production or reproduction, conditioning for the purpose of propagation, offering for sale, selling or other marketing, exporting, importing and stocking of all propagating material. Additionally, the protection under the 1978 Act does not extend either to the harvested material or to the products made directly from the harvested material.⁵⁶
- The 1978 Act allows unlimited use of the harvested material for further propagation by farmers – the so-called “farm saved seed exemption” or “farmer’s privilege” – whereas the 1991 Act makes the farmer’s privilege conditional upon explicit domestic legislation.
- The 1978 Act provides no protection for so-called “essentially derived varieties”, whereas these varieties are protected in the 1991 Act.
- The minimum period of protection provided for in the 1978 Act is 18 years for trees and vines and 15 years for other varieties; whereas in the 1991 Act trees and vines are protected for 25 years and other varieties for 20 years. The duration of the term of protection begins the moment protection is granted.

⁵⁴ In the US, for example.

⁵⁵ Among the 74 UPOV members, 56 are bound by the 1991 Act, 17 by the 1978 Act and one is still bound by the 1961 Convention as amended by the 1972 Act.

⁵⁶ In the 1991 Act the protection extends also to acts done with the harvested material of a protected variety under certain conditions, and there is also a possibility for UPOV members to provide protection on the products directly obtained from harvested material.

Plant variety rights (PVR) laws having a lower standard than the UPOV 1991 Convention provide weaker protection and, therefore, often act as a disincentive for businesses to enter the market. Additionally, in many countries the laws governing the enforcement of IP rights are often not made explicitly applicable to PVR, meaning that, even if a PVR title is granted, its value will be limited if the right cannot be properly enforced.

UPOV's current membership stands at 74 and is gradually expanding as more members subscribe to the 1991 Act.⁵⁷ Multilateral or bilateral free trade agreements, – e.g. the Trans Pacific Partnership – also encourage this trend, often by requiring signatories to be or to become members of UPOV 1991.

FUTURE PERSPECTIVES | Business should continue to highlight shortcomings in PVR laws, to seek to encourage UPOV members to adhere to the 1991 Act of the Convention, to encourage countries to join UPOV, and to increase its efforts to educate governments about the special needs and features of IP protection for plant innovations. Governments of UPOV member countries should continue to encourage countries that are not yet members to join. These governments should also encourage UPOV member countries to update their own laws to UPOV 1991 standards and to promote the proper enforcement of plant variety rights.

VIII. TRADE SECRETS / CONFIDENTIAL BUSINESS INFORMATION

BACKGROUND | Information and knowledge are generally said to be the most valuable assets of a company. Trade secrets and confidential business information, as part of these intellectual assets, are of growing importance, especially in light of the globalisation of trade and interconnected supply chains. Trade secrets encompass various types of business information – whether technical, commercial or financial – that is not known or readily ascertainable by the relevant public and which gives a business a competitive edge (e.g. undisclosed financial results, new product plans, bills of material, price calculation methods, customers' lists and profiles, distribution methods, food and beverage ingredients and chemical formulas, etc.). In general, information is eligible for trade secret protection if it is identified, substantial and secret, as stipulated in Article 39 of TRIPS. National legislation often requires, in addition, that trade secrets are effectively secured to enjoy legal protection. The EU Trade Secret Directive requires that adequate measures need to have been taken by the proprietary holder in order to enjoy protection.⁵⁸ Trade secret protection is automatically afforded without registration and can last without limitation in time as long as confidentiality is maintained.

When the trade secret is patentable know-how, the scope of legal protection granted by patent law and trade secret status respectively has to be carefully compared before deciding whether to patent the invention or keep it secret. There are several key factors that influence this decision, including the rather high fees for registering and maintaining a patent, the fact that patents are public and require the disclosure and registration of the subject matter, and the fact that information need not be technical, new, original or non-obvious in order to be protected as a trade secret, unlike for patent protection. It should be noted that inventions are often protected as trade secrets during their development. Furthermore, patents and trade secrets are often combined by revealing only parts of an innovation for the purpose of patent registration, while keeping other elements secret.

CURRENT LANDSCAPE | Whereas it is standard business practice to have confidentiality and non-disclosure agreements as well as non-compete agreements in employment contracts to limit unwanted leaks and unauthorised use of valuable business information – e.g. unauthorised transfers

⁵⁷ See www.upov.int/export/sites/upov/members/en/pdf/pub423.pdf .

⁵⁸ See www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P8-TA-2016-0131&format=XML&language=EN .

of trade secrets -, the prevalence of trade secret theft in the supply chain or in collaborations – such as joint ventures – is often underestimated.⁵⁹

The laws in place provide for trade secret protection mainly under unfair competition law. Many of these laws expressly address the risks of leaks by employees but not the risks of leaks by suppliers. A significant percentage of trade secret cases are due to misappropriation by suppliers and other business partners. With regard to the protection of trade secrets against abuse by employees, there are great differences in national legislations and in the employers' and authorities' powers to act in a suspected case.

The OECD published a two-phase project comparing the regulatory regimes concerning trade secrets in different jurisdictions⁶⁰ and analysing their economic consequences⁶¹. The papers show, on the one hand, substantial differences with respect to implementation of protection for trade secrets and, on the other hand, evidence that there is more innovation in countries with higher trade secret protection. A notable increase in the stringency of trade secrets protection in a broad sample of countries during the period from 1985 to 2010 was found by the OECD to be positively associated with key indicators of innovation and international economic flows.⁶² A 2013 study commissioned by the European Commission provides a detailed review of the legal frameworks governing trade secrets in EU Member States, Japan, Switzerland and the US, as well as the results of a survey of EU companies on their perceived needs with respect to trade secrets protection.⁶³ Trade secrets have also been studied by several other institutions.⁶⁴

Since then, an important step towards stronger protection has been made by the recently adopted EU Trade Secrets Directive⁶⁵, whose aims are to harmonise trade secret legislation across the EU to facilitate cross-border transfer of know-how and foster competition and innovation. The Directive strengthens the definition of trade secrets and gives broad protection against unfair or illegal use of trade secrets by employees. Another step forward towards broader trade secret protection is the US Defend Trade Secrets Act of May 2016, which creates an *ex parte* seizure order procedure and protects information provided in confidence by whistleblowers to government or court officials.⁶⁶

However, trade secret protection remains weak in many countries, due partly to the lack of specific protective legislation and partly to the lack of awareness by the judiciary and other administrative bodies. Sanctions against procurement, use or disclosure of a trade secret through application of the laws on unfair competition or practices – a branch of tort law – are also provided by Article 39 of TRIPS. Violation of a confidentiality undertaking can also be treated as a breach of contract. In limited cases, such as theft or business espionage, misappropriation of trade secrets can be a criminal offence.

FUTURE PERSPECTIVES | Improved rules and stringent policies are essential but will not solve the problem of global trade secret abuse alone. A realistic risk assessment is necessary to determine the necessary level of information security to protect trade secrets. In addition to the misappropriation of trade secrets by employees and external partners, increasing global sourcing and the expansion of

⁵⁹ See www.mobar.org/uploadedFiles/Home/Publications/Journal/2015/01-02/corrigan.pdf .

⁶⁰ See [dx.doi.org/10.1787/5jz9z43w0jnw-en](https://doi.org/10.1787/5jz9z43w0jnw-en) .

⁶¹ See [dx.doi.org/10.1787/5jxzl5w3j3s6-en](https://doi.org/10.1787/5jxzl5w3j3s6-en) .

⁶² See www.oecd.org/sti/ieconomy/Chapter3-KBC2-IP.pdf .

⁶³ See ec.europa.eu/growth/tools-databases/newsroom/cf/itemdetail.cfm?item_id=8269&lang=en&title=Study-on-trade-secrets-and-confidential-business-information-in-the-internal-market .

⁶⁴ See e.g. the Gonzaga University Law Review study of 2010 on trade secret litigation, www.law.gonzaga.edu/law-review/files/2011/02/Almeling.pdf ; or the Centre for Responsible Enterprise and Trade (CREATE) publications on trade secret protection, create.org/resources/ .

⁶⁵ EU Directive 2016/943 of 8 June 2016, eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32016L0943 .

⁶⁶ See www.congress.gov/bill/114-congress/senate-bill .

businesses to high-growth markets increase the risk of unauthorised use of trade secrets and confidential business information. Effective protection against misappropriation of trade secrets is, therefore, important to encourage knowledge sharing and collaboration.

Businesses need to set up effective information security policies, measures and training programs to effectively secure their intellectual property against the growing risks of trade secret misappropriation. Good information security practice is of utmost importance and a natural focal point for protection measures is the unauthorised disclosure of information by employees. Preventive measures in relation to current and past employees and business partners will help to reduce the misappropriation of trade secrets and confidential business information and allow companies to take full advantage of the global economy. These actions cannot be effectively replaced by legal actions, which usually take place after the fact.

ICC CONTRIBUTIONS | ICC published a research paper in 2014 on trade secrets and their role in the innovative process as part of its research series on the role of intellectual property in innovation.⁶⁷ ICC is also following trade secrets regulation in different jurisdictions.⁶⁸

IX. OTHER FORMS OF INTELLECTUAL PROPERTY

1. Information products (e.g. databases)

BACKGROUND | An increase in innovation and business activities around data collection, processing and enrichment has led policy makers to reflect on existing and possible new forms of IP protection for data products and services. One outcome of this reflection has been the creation of a specific protection for databases granted in the EU. More recently, the development of connected devices and machines (Internet of Things, IoT), drones and other image and voice recording devices – which produce valuable data and content thanks to innovative technologies – has also raised questions relating to IP protection.

Databases are often very valuable assets whose contents can be licensed, transferred, used to conduct business activities and research and to elaborate new products and services. Wider access to databases managed by public entities – e.g. through the open data movement – contributes to the dissemination of factual knowledge and can spur innovative projects. The economic importance of databases became obvious in the mid-1990s when their status as key companions of software products changed to that of strategic economic assets in their own right. The TRIPS agreement and preceding copyright treaties such as the Berne Convention had provided copyright protection for compilations. However, in the 1990s, concerns arose as to how to address the protection of the investments of makers/producers of databases developed by businesses.

Apart from the Berne Convention and Article 10 of the TRIPS agreement, there is no international instrument harmonising legal protection afforded to the makers of databases, which enables them to prevent unauthorised use of the contents of their databases. When the WIPO Internet Treaties on Copyright, Performances and Phonograms were adopted in 1996, a proposal for an international instrument on the protection of non-original databases as one of the pillars of a future international framework on content protection in the information society was discussed but not adopted, and there has been no progress ever since.

⁶⁷ See iccwbo.org/global-issues-trends/innovation-ip/innovation/.

⁶⁸ See *ICC Comments on Proposal for EU Trade Secrets Directive* (2014) at iccwbo.org/publication/icc-comments-on-proposal-for-eu-trade-secrets-directive-2014/.

CURRENT LANDSCAPE | Today, databases cover a wide range of products such as directories, libraries, websites, web platforms, various listings of any kind, image banks, medical files, etc.. Most countries rely on unfair competition, breach of contract, unlawful business interference, misappropriation and various grounds of tort law to protect database makers. A few jurisdictions, notably the EU through its 1996 Database Directive⁶⁹, provide for protection of unoriginal databases in their national laws. In most countries, various forms of compilation, including databases, may also be copyrightable under the concept of “compilation” or “collection” used in the Berne convention.

Article 10 of TRIPS obliges member countries to protect “compilations of data or other material, whether in machine readable or other form, which by reason of the selection or arrangement of their contents constitute intellectual creations” while the EU Directive defines a database as “a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means”.

The EU Database Directive, adopted to enhance the fight against free-riders and to harmonise the legal regime within the EU, confirms the availability of copyright protection for the author of the database, and also establishes a *sui generis* right for the database maker.

With respect to copyright protection, the Directive provides that any rights – such as copyright – subsisting in individual elements incorporated into the database should remain unaffected. It also provides that the author of the database should enjoy copyright protection over the database itself provided that, by reason of the selection or arrangements, it is sufficiently original to be qualified as the “author’s own intellectual creation”.

The *sui generis* right is granted if the database maker can demonstrate a qualitatively and/or quantitatively substantial investment either in the obtaining, verification or presentation of the contents of the database.

Four famous European Court of Justice (now the Court of Justice of the European Union – CJEU) decisions in 2004 – involving British Horses Board (BHB) and Fixtures Marketing – gave a restrictive interpretation to the concept of “substantial investment”, holding that “creating” the data to be gathered in the database does not qualify as a relevant investment for the granting of the *sui generis* database right. This was confirmed by another important ruling in 2012.⁷⁰ While obtaining or collecting existing data may qualify as an investment under the Database Directive, it may be difficult to fulfil the strictly applied criteria of “substantial investment”, especially if the collection is automated using standard hardware or software, or Internet tools.

The *sui generis* right empowers the database maker to prevent the extraction and/or re-use of the whole or qualitative and quantitative parts of the database content, with exceptions or limitations for private use and non-commercial scientific research. The CJEU has provided helpful guidance on the fundamental concepts of extraction and reutilisation⁷¹ as well as on issues of the location of infringement and international jurisdiction⁷². In the landmark 2015 case *Ryanair v PR Aviation*⁷³ concerning the unauthorised extraction of flight data from a website (screenscraping), the CJEU held that, even if a database is neither protected by copyright nor by a *sui generis* right under the Directive, its owner is not prevented from laying down contractual limitations on its use by third parties, without prejudice to the applicable national law.

⁶⁹ EU Directive 96/9/EC of 11 March 1996.

⁷⁰ See *Football Dataco Ltd and Others v Yahoo! UK Ltd and Others*, Case C-604/10.

⁷¹ Cases C-545/07 and C-202/12.

⁷² Case C-173/11.

⁷³ Case C-30/14.

FUTURE PERSPECTIVES | The scope of legal protection for databases – whether under the *sui generis* right in the EU or on other grounds – remains a subject of discussion, essentially because new uses and new tools to collect and exploit data are constantly developing and fuelling the digital economy. As with many accelerating technologies, new challenges have also surfaced. These include: possible abuses of dominant position or violations of privacy and consumer laws, which have an impact on how rights over databases can be exercised; the Big Data phenomenon, where cloud computing systems allow remote storage of and access to more diverse and ever-larger data sets updated in real-time, potentially creating access and control issues; the use of deep links to navigate or to index contents of websites, raising concerns of free-riding and infringement of IP rights; and the challenge of protecting personal data when data about individuals' interests, networks, habits and behaviours is centralised in metadatabases. Privacy-by-design methodologies, proactive industry self-regulation and collaboration of all stakeholders are effective measures to mitigate risk, preserve innovation, and enable sufficient flexibility to respond to new and unforeseen developments and balance the interests of all stakeholders. The continued expansion of the data being collected and processed worldwide, accelerated by the Internet of Things and new data-driven products and services, will likely bring about new generations of databases, interacting in a connected value chain.

IoT can be described as the connectivity and infrastructure that enables all types of devices and machines to interoperate and communicate with one another.⁷⁴ Due to its potential for multiple applications, productivity gains, and time and resource savings in manufacturing products or providing services, IoT has been attracting growing interest and the increased involvement of businesses. Relying on a layered technological ecosystem, IoT can collect large amounts of information on everything from energy use and crop development to blood pressure. In addition to privacy and cybersecurity challenges, this field raises IP issues which are similar, to some extent, to those encountered by the mobile telecoms industry and which touch upon almost the whole range of IP rights – patents, know-how, copyright, designs and trademarks. The emergence of IoT and its specificities will also bring increased attention to the issues of ownership and access to the data (personal or not) which is generated by the network of connected devices.

Already used in military applications since World War II, the increasing use of drone technology for a broad range of civilian applications will also have an impact on data creation and collection. The use of drones to collect and transmit images, sounds, metrics or any other types of data, thanks to embedded or embarked cameras and other devices, can generate a valuable output for the owner or operator of the drone. In the absence of an explicit agreement on this issue, it may be unclear who owns the collected data or any potential IP rights over the data. Possible owners could be, for example, the owner or operator of the drone, the client commissioning the service, or the holder of the source of the data. A parallel can be drawn with satellite imaging technology, where the same issues arise. Issues of infringement by reproduction and further communication to the public of images of IP-protected buildings, infrastructures and works of art may also surface, not to mention potential privacy violations.

In addition to data-related issues, both IoT and drone technology share a common characteristic and challenge, which is that potentially valuable data and content is created by automated intermediary processes and not directly by humans, as can also happen with artificial intelligence. This may lead to reflection on how IP laws can integrate this new reality, and whether current IP regimes have to be adapted or new forms of IP protection envisaged in order to accommodate such developments.

ICC CONTRIBUTIONS | The ICC Commission on the Digital Economy has issued a comprehensive policy report on the Internet of Everything, which reviews the impact of this fast-spreading interactive

⁷⁴ See the *ICC Primer on the Internet of Everything*, an ICC Commission on the Digital Economy policy report, which reviews the impact of the Internet of Everything and its policy implications for businesses and public authorities; iccwbo.org/publication/icc-policy-primer-on-the-internet-of-everything/.

combination of networks, objects and data pipelines, and its many opportunities for businesses and consumers altogether. The report identifies the key businesses practices and policy recommendations for public authorities to consider.⁷⁵

2. Indigenous / community / traditional rights

BACKGROUND | Indigenous peoples possess unique information and resources, which in some cases have become public or have been used, in original or modified form, without the permission of the originators or any return to them. Discontent with this situation has led to proposals for the creation of one or more international instruments for the protection of traditional knowledge (TK) – e.g. relating to agriculture and medicinal plants – and traditional cultural expressions (TCEs) – e.g. handicrafts, dances, songs and stories from misappropriation. It is similarly argued that such instruments should also be set up for the protection of genetic resources (GRs). These proposals are regarded with caution by many who feel that they may be unclear, unduly burdensome, overly broad and difficult to implement.

CURRENT LANDSCAPE | Most progress to date has been made on genetic resources. These are the subject of the Convention on Biological Diversity (CBD), which entered into force in 1993, and of the so-called Nagoya Protocol, which specifically regulates the third objective of the CBD regarding the equitable sharing of the benefits arising out of the utilization of genetic resources. In contrast to the CBD, which addresses TK associated with genetic resources as a side issue, the Protocol regulates access to and benefit sharing from utilization of TK in the same manner as for genetic resources (for more details, see section D.II.1. Biological diversity).

Negotiations on an international instrument for the protection of traditional knowledge – whether associated with GRs or not – and of traditional cultural expressions (TCEs) have been ongoing in a WIPO Intergovernmental Committee (IGC) since 2000. Progress is slow and much disagreement remains. Negotiations were discontinued in 2015, during which WIPO organized two seminars on issues under negotiation, but resumed in 2016 in a similar format as before.

Remaining controversial issues include: the objectives and legal status of the instrument(s); the definitions of TK and of its misappropriation and misuse; the subject matter and scope of protection; the beneficiaries of protection; complementary measures in the form of databases and codes of conduct, sanctions and remedies, exceptions and limitations (e.g. for TK which has been independently created or is in the public domain); the term of protection; and whether protection would require any formalities. As in the context of the negotiations on an instrument for the protection of genetic resources, one issue relates to a proposal to require patent applicants to disclose the country of origin or source of all TK mentioned in their patent applications.

FUTURE PERSPECTIVES | As mentioned above, access to TK associated with genetic resources is addressed in the Nagoya Protocol, which is in the process of being implemented at the national level. Discussions at WIPO will continue during the 2016-17 biennium, with sessions dedicated to TK as well as to TCEs. A decision on whether a diplomatic conference should be set up for the adoption of one or more international instruments for the protection of TK and TCEs, or on whether negotiations should continue or be abandoned is scheduled to be made by the WIPO General Assembly in 2017.

ICC CONTRIBUTIONS | ICC has worked actively on access and benefit-sharing (ABS), representing business at all relevant meetings of the CBD and the Nagoya Protocol, and will continue to contribute

⁷⁵ Idem.

business experience and expertise to these processes. ICC has also been regularly represented at the WIPO Intergovernmental Committee (IGC) during the negotiations and discussions on genetic resources, TK and TCEs, putting forward the views of business which were also conveyed in a recently published document on protecting traditional knowledge.⁷⁶

ICC has resisted proposals for mandatory disclosure of origin or source of GRs, TK and TCEs in patent specifications, deeming them unnecessary, burdensome for applicants and patent offices and not achieving the objectives of the CBD and the Protocol. ICC also argues for maintaining freedom for all to use information and materials in the public domain as a source of future innovation.

⁷⁶ See *Protecting Traditional Knowledge – Submission to WIPO* (2016), iccwbo.org/publication/icc-paper-on-protecting-traditional-knowledge/.

C. Tackling intellectual property rights infringements and disputes

I. LITIGATING INTELLECTUAL PROPERTY RIGHTS

BACKGROUND | As a general rule, intellectual property rights are not only granted but also determined in their scope, enforcement and validity by national authorities within a particular territory. However, even under such parameters, differences in the way in which laws may be applied may exist between courts within a particular jurisdiction or within supranational schemes such as the EU trade marks and Community designs systems and the European Patent Convention.

These inconsistencies – including differences in the rules applied to evidence and claim construction; differences in the cost, length, predictability and outcome of litigation; differences in the rules applied to the recovery of damages; the availability of interlocutory relief; and the sanctity or discoverability of communications between clients and their legal advisors – have encouraged forum shopping by litigants seeking the most favourable jurisdiction in which to have their interests protected, leading in some instances to uncertainty.

CURRENT LANDSCAPE | Important worldwide efforts are being made in order to continue underpinning harmonisation efforts such as TRIPS, which provides for minimum standards related not only to the protection of IP rights but also to their effective enforcement by means of border measures, civil, administrative and criminal actions and provisional measures. Based on the EU Enforcement Directive⁷⁷, EU Member States had to adapt their national laws in order to provide for similar measures for IP owners throughout Europe when enforcing their IP rights.

Of course, businesses not only seek to enforce IP rights but also to defend their activities against IP claims of all types, including patent, copyright and trademark claims. Since IP protection is afforded on a territory-by-territory basis, businesses active globally may be the target of enforcement activities across jurisdictions, each applying differing standards of enforcement of IP, with the result that activities which are defensible in one jurisdiction may not be so in another.

Notwithstanding the continued harmonisation efforts to enhance uniformity and predictability in the area of IP protection and enforcement, businesses are aware of the need to adapt their activities according to differing national laws. Different trademark rules – e.g. use requirements – in various countries may affect the ability to acquire or enforce a brand. In copyright law, differences in rules and the way they are applied – e.g. with respect to exceptions and safe harbours, moral rights and publicity rights – may pose legal and operational challenges for businesses operating in different jurisdictions.

FUTURE PERSPECTIVES | It is foreseeable that businesses and national decision-makers will continue supporting harmonisation efforts both in the international and the regional arena. Both businesses and decision-makers should also pay special attention and direct their efforts to strengthening the harmonisation of standards that will allow the application of effective solutions to problems such as counterfeiting and piracy. Such efforts should also take into consideration the particular challenges arising from new forms of intellectual property infringement e.g. those derived from the use of the Internet.

⁷⁷ Directive 2004/48/EC of 29 April 2004 on the enforcement of intellectual property rights.

Perhaps the most imminent significant harmonisation project is the Unified Patent Court in Europe. When it enters into operation, the Court will provide a common patent court for many – but not all – EU countries, with jurisdiction both over parallel classical European Patents and a new Unitary Patent. The Court is expected to become operational in December 2017 but the Brexit vote has added uncertainty to the timeline and even to the future of the Court itself (See section B.I.4. The work on the patent system in Europe).

Despite the efforts made in some jurisdictions, such as the EU Rome I and Rome II Regulations⁷⁸ and other equivalent pieces of law, it remains important for governments and businesses to promote the execution and ratification of the Convention on Choice of Court Agreements⁷⁹ which will likely simplify the effective enforcement of IP rights worldwide.

Further efforts should also include initiatives to harmonise court procedures and recognition of judgments, and to develop current principles in that area, as well as to ensure the existence and effectiveness of interim remedies to provide emergency IP protection.

ICC CONTRIBUTIONS | ICC continues to provide business expertise on the issues arising from these harmonisation efforts, always seeking to promote competitiveness and social and economic welfare. In May 2016, ICC issued a report on specialised IP jurisdictions (SIPJs) worldwide, *Adjudicating Intellectual Property Disputes*⁸⁰, based on a survey conducted among ICC experts from 24 countries. The report reviews various aspects of SIPJs, including their structure and competence, qualifications of judges, judicial procedures, rules of evidence and representation.

II. RESOLUTION OF INTELLECTUAL PROPERTY DISPUTES BY ARBITRATION OR MEDIATION

With the expansion of international trade in recent years, there has been a proliferation of disputes involving a variety of intellectual property (IP) rights. In the meantime, new models of contractual relationships have emerged, such as venture capital investments, which are primarily focused on creating and developing – rather than simply trading in – IP rights. Hence, there has been an increase in technology-related agreements such as licences, non-disclosure agreements (NDAs) and research and development (R&D) agreements. These agreements may give rise to disputes relating to IP rights such as patents, trade secrets and copyrights. While intellectual property disputes are not fundamentally different from other types of commercial disputes, disputes arising out of technology-related agreements can be complicated, requiring flexible procedures and expert knowledge. Both arbitration and mediation offer advantages that make these mechanisms particularly appropriate for the resolution of intellectual property disputes.

1. Arbitration

BACKGROUND | Disputes concerning intellectual property typically involve the ownership, validity, enforcement, scope, infringement or misappropriation of an intellectual property right. Other important aspects may relate to damages, royalties, competition matters or financial conflicts.

⁷⁸ See eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008R0593 and eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32007R0864, respectively.

⁷⁹ Convention of 30 June 2005 on Choice of Court Agreements, www.hcch.net/en/instruments/conventions/full-text/?cid=98.

⁸⁰ See iccwbo.org/publication/adjudicating-intellectual-property-disputes-an-icc-report-on-specialised-ip-jurisdictions/.

There are many situations where arbitration may be appropriate, such as disputes involving intellectual property licences, agreements for the transfer of intellectual property (e.g. in the context of a business or company acquisition) or agreements pursuant to which intellectual property is developed (e.g. research or employment contracts and venture capital or co-founding agreements).

Arbitration has notably four fundamental features: (i) it is a private mechanism for dispute resolution; (ii) it is an alternative to national courts; (iii) it is selected and controlled by the parties; and (iv) it is the final and binding determination by an impartial tribunal of the parties' rights and obligations.

Parties choose to go to arbitration rather than to a national court for various reasons. First, based on the principle of party autonomy, arbitration provides the parties with the possibility of choosing a neutral forum as well as the rules of procedure and the language to be applied by the tribunal. Second, as the arbitration award is final and binding, there should be no appeals and the award will be directly enforceable under the New York Convention on the Recognition and Enforcement of Arbitral Awards (the New York Convention⁸¹). The mechanism for enforcing arbitration awards is better regulated internationally than the enforcement of national court judgments. Third, the autonomous nature of the arbitration process allows the parties and arbitrators the flexibility to freely determine the procedure best suited for the particular case, without being bound to detailed, rigid and time-consuming national court procedures. Fourth, the parties may select arbitrators with expert knowledge and from certain legal backgrounds. Another advantage of arbitration is the possibility of keeping the arbitration and the award private and confidential, which is particularly pertinent for disputes involving secret intellectual property processes and rights.

Parties usually agree to arbitration before a dispute arises, by including an arbitration clause in their main substantive contract, e.g. the licence or the research and development (R&D) agreement. Alternatively, parties can agree to submit to arbitration after a dispute arises. Until recently, post-dispute arbitration agreements in intellectual property cases have been comparatively rare. IP rights are inherently territorial and parties often engage in litigating parallel rights simultaneously in different countries, sometimes with different results. Given the expense and uncertainty of parallel litigation, it may be that post-dispute arbitration cases will increase, particularly if arbitral institutions, such as the ICC International Court of Arbitration, are well-equipped to administer such cross-border IP disputes.

In either case, there are three important factors which the parties to an IP contract need to carefully consider when drafting an arbitration clause or submitting to arbitration: (i) availability of injunctive interim or conservatory relief; (ii) confidentiality of the arbitration proceedings; and (iii) the possibility of adopting expedited arbitration procedures.

CURRENT LANDSCAPE | A comprehensive framework for the resolution of cross-border commercial (including intellectual property) disputes is already in place. First and foremost, the New York Convention ensures that arbitration awards will be directly enforceable in 157 jurisdictions. Secondly, 72 countries have adopted the UNCITRAL Model Law in International Arbitration so that the majority of countries have arbitration-friendly legislation, supported by well-settled case law. Thirdly, a great variety of non-state institutions, chief among which the ICC International Court of Arbitration, administer a large number of arbitration proceedings in IP disputes every year. The 2012 ICC Arbitration Rules as amended in 2017 apply to arbitration agreements concluded after 1 March 2017. The 2012 Rules introduced a number of amendments resulting in positive implications for the resolution of IP disputes. For example, they include new provisions for multiparty proceedings, provide for emergency arbitrators that may grant urgent interim or conservatory relief and provide for an expedited procedure. Finally, well-recognised international professional organisations, such as the International Bar Association, publish non-binding guidelines and best practices which provide very

⁸¹ See www.uncitral.org/uncitral/en/uncitral_texts/arbitration/NYConvention.html.

useful guidance on a number of areas relating to arbitration proceedings, such as the taking of evidence⁸² or the appropriate conduct of arbitrators⁸³.

This comprehensive legal framework has fostered a number of positive developments in out-of-court dispute resolution in the last 20 years. One of the main achievements, with significant implications for intellectual property transactions, has been the fact that a wide range of IP-related disputes is now considered “arbitrable”, i.e. capable of being decided by arbitral tribunals. This is particularly the case with IP disputes relating to copyrights and know-how, as well as some types of patent disputes relating to infringement and royalties. Overall, there is a clear tendency both in the EU and in the US towards an increased use of arbitration in patent disputes.

There are some intellectual property disputes which cannot be submitted to arbitration. In particular some IP rights such as patents for inventions, design patents or registered designs, and registered trademarks are granted by governmental or intergovernmental organisations such as patent or trademark offices. Such rights can only be revoked by a national court or other state authority – arbitrators have no power to order revocation. Similarly, some competition law remedies – e.g. fines – can only be granted by competition authorities or a relevant national court. Despite these limitations, it is generally possible for questions of validity or competition law to be dealt with in an arbitration, but the result is binding only between the parties and not *erga omnes*.

FUTURE PERSPECTIVES | Businesses should take the following points into account when considering arbitration of intellectual property disputes:

- To incorporate *ex ante* an arbitration clause, e.g. the ICC Arbitration clause, in their main substantive contract, – e.g. the licence or the R&D agreement – or consider arbitration post-dispute.
- To ensure that injunctive interim or conservatory relief is available even before arbitration commences. To that effect, parties should consider choosing arbitration rules that provide for interim measures to be granted by the arbitral tribunal as well as for emergency relief even before the constitution of the tribunal⁸⁴. In some cases, the support of national courts might be useful.
- To ensure that the arbitration proceedings and the final award will be confidential. Although secrecy provisions in the underlying substantive contract will usually hold well for the arbitration procedure, parties should include an express provision of confidentiality covering the arbitration proceedings, arbitration-related documents and arbitral award. Alternatively, parties either agree on confidentiality in the terms of reference or request the tribunal to grant a procedural order for confidentiality. The ICC Arbitration Rules contain a provision explicitly allowing for “confidentiality orders”.
- Where time and costs are of the essence, parties may consider opting in for the expedited arbitration procedure (available under the ICC Arbitration Rules).
- To facilitate enforcement and to help to obviate potential problems related to arbitrability, it may be useful to add a clause whereby the parties agree to enforcement.

⁸² See *IBA Rules on the Taking of Evidence in International Commercial Arbitration*, www.ibanet.org/Publications/publications_IBA_guides_and_free_materials.aspx.

⁸³ See *IBA Guidelines on Conflicts of Interest in International Arbitration*, www.ibanet.org/Publications/publications_IBA_guides_and_free_materials.aspx.

⁸⁴ See e.g. Article 29 of the ICC Arbitration Rules, providing for emergency arbitrator proceedings: iccwbo.org/dispute-resolution-services/arbitration/rules-of-arbitration.

- Parties should be careful to expressly select the seat of arbitration in a country which has a legal framework that is supportive of the arbitration and is party to the New York Convention.
- Where parties consider expertise in intellectual property issues to be essential, they should consider specifying in their arbitration clause that the arbitrators should have suitable qualifications and/or experience; and, if within the dispute resolution process the appointment of a neutral expert is needed, they may consider making use of services under e.g. the ICC Expert Rules.
- Complex IP disputes usually require extensive evidentiary processes. In such cases, parties and tribunals are advised to consider adopting the 2010 IBA Rules on the Taking of Evidence.⁸⁵

Continuing support from international institutions with specialist knowledge, including UNCITRAL with its Model Law, ICC, WIPO and WTO will greatly facilitate arbitration of intellectual property disputes.

Governments should take the following actions:

- Ratify the New York Convention on Recognition and Enforcement of Arbitral Awards (1958). 156 countries have already done so and efforts should be made to persuade the remaining states to ratify.
- Adopt the UNCITRAL Model Law on International Commercial Arbitration (1985, with the 2006 amendments) or a modern arbitration law.

2. Mediation

BACKGROUND | Mediation may be defined as a confidential process whereby a mediator – i.e. a neutral third party – assists the parties in finding an interest-based settlement to their dispute without imposing a solution. Mediation is normally a voluntary process. The mediator assists the parties in isolating points of agreement and disagreement, exploring alternative solutions and considering compromises in order to find a mutually satisfactory settlement of their dispute. Mediators cannot make binding adjudicatory decisions, but they assist the parties in reaching a settlement that is, following the parties' agreement, contractually binding.

The strength of mediation is that it allows the parties to negotiate the resolution of their dispute, rather than be the recipients of a third party's solution. The parties may negotiate a solution based on their current and future needs and business interests such as financial considerations, future business relations, competition, reputation and market value. The mediator, unlike a judge or arbitrator, is not limited to applying a certain set of rules to past facts in order to determine the legal situation between the parties. Other advantages are that mediation is confidential and that the mediator may assist the parties in achieving any type of solution that they consider acceptable.

Any mediation is commenced consensually by the parties. A dispute resolution clause in the parties' contract providing for mediation is the easiest way to ensure that the parties will try to amicably settle their dispute, but an agreement to mediate is not a prerequisite to start mediating. Parties might also decide to attempt a settlement by mediation when the dispute has already arisen, or even when they have already commenced other dispute resolution procedures such as arbitration or litigation. The

⁸⁵ See www.ibanet.org/Publications/publications_IBA_guides_and_free_materials.aspx .

high success rate of mediations indicates that the attempt to settle the dispute by mediation can be successful at any stage of the proceedings.

As the purpose of mediation is the negotiation of a settlement, situations where no negotiation and cooperation between the parties is possible – e.g. cases of deliberate counterfeiting or piracy – are normally inappropriate for mediation.

On the other hand, mediation of intellectual property disputes may be particularly appropriate in situations where certain points are important, such as the maintenance of confidentiality of the dispute or the parties' relationship, and the preservation or development of business relationships between the parties e.g. through licence agreements. The parties to the mediation will – in most cases – directly execute the outcome of the mediation because they have agreed to it between themselves, without further need for recognition and *exequatur* procedures. This feature is of great advantage in an international IP dispute where several countries may be involved.

CURRENT LANDSCAPE | Mediation's relevance and acceptance as an effective dispute resolution method has significantly grown in the last 20 years. Currently, courts in most countries encourage mediation and will uphold the parties' final settlement agreement ensuing from a successful mediation. Further, a number of institutional rules on mediation, such as the ICC Mediation Rules⁸⁶, are available and well-suited to intellectual property disputes. ICC mediation is administered by the ICC International Centre for ADR and the advantages of such administered mediation proceedings are numerous. The ICC ADR Centre can: facilitate the setting up of the proceeding by providing all parties with the relevant information and ensuring that procedural hurdles are overcome; assist parties to designate or appoint mediators; oversee financial aspects, including the fixing of the mediator's fees; supervise proper conduct of the proceedings under the ICC Mediation Rules; replace the mediator if necessary and answer the parties' questions; and provide assistance throughout the entire process.

Awareness of mediation has also spread rapidly among businesses, due to many mediation conferences such as the annual ICC International Mediation Conference, which is tailored to the needs of corporations, and the ICC Mediation Competition. As a result, commercial parties have slowly but surely been increasing their trust in mediation for the resolution of their commercial disputes – both domestic and cross-border – including IP disputes. The use of ICC and other services offering administered mediations in IP disputes is therefore expected to increase.

FUTURE PERSPECTIVES | Certain courts handling IP disputes in some countries, such as the United States Court of Appeals for the Federal Circuit and the German Patent Court, have set up mediation schemes under which judges refer parties in patent disputes to mediation before taking a decision. On a regional level, the upcoming Unified Patent Court in Europe will have an associated Arbitration and Mediation Centre, and mediation services are also offered by the European Union Intellectual Property Office (EUIPO). Mediation becomes available once a decision taken at the EUIPO in the context of *inter partes* proceedings related to trademark or design matters is appealed. This is not an option, for the time being, in opposition or cancellation proceedings.

Evidence for the growing support for mediation can be found in a number of legislative initiatives in different countries and regions, the most important being the EU Mediation Directive⁸⁷, an ambitious effort to facilitate access to mediation for the resolution of cross-border commercial disputes. Its primary goals are to enhance the enforceability of the agreements resulting from mediation, and further protect confidentiality of the mediation process; additionally, it encourages Member States to ensure the quality of mediation through a code of conduct and training of mediators.

⁸⁶ See iccwbo.org/dispute-resolution-services/mediation/mediation-rules/.

⁸⁷ Directive 2008/52/EC of 21 May 2008 on certain aspects of mediation in civil and commercial matters.

III. ENFORCEMENT ON THE INTERNET

BACKGROUND | While the Internet has created tremendous distribution possibilities for rightsholders, its ubiquity and the ease and speed of reproduction and transmission of digital content have made it difficult for rightsholders to control the unauthorised exploitation of their rights. A holistic approach to address the benefits and the challenges of the Internet includes consumer education, availability of marketable legitimate offers and effective enforcement. Different business models are being tested to expand and increase the attractiveness of legitimate online services, which could help encourage consumers to use legal avenues to access content online and reduce the rate of infringement. In the meantime, the damages resulting from unauthorised distribution increase considerably the risks and costs associated with the roll-out of new legitimate services – a situation that ultimately hinders economic development, social welfare and consumer satisfaction.

CURRENT LANDSCAPE | New technologies and increased access to the Internet and communication networks around the world bring with them increased opportunities both to exploit and to infringe intellectual property (IP) rights.

Under this particular scenario, it is clear that enforcing IP rights over the Internet has become a critical topic in the intellectual property arena. However, the very nature of the Internet brings along complex jurisdiction and enforcement issues as intellectual property owners might be required to pursue actions in any country where, arguably, an infringement to their IP rights took place. While information and communication technologies (ICT) afford new tools for detection of online infringements, the very nature of Internet activity poses important evidence-gathering issues as well as real problems related to the identification and ultimate location of the alleged infringer. The contribution of intermediaries in the fight against illegal file sharing must, of course, comply in all applicable cases with the presumption of innocence and the right to a fair trial, as well as meet relevant due process requirements for the disclosure of confidential information, including communications.

Governments, rightsholders and intermediaries around the world are considering how to provide for better regulation and effective enforcement of intellectual property rights over the Internet while respecting other fundamental rights such as the presumption of innocence, fair trial, privacy, confidentiality of communications and property rights. A host of different approaches are being employed, including litigation, injunctive relief and cooperation with intermediaries:

- *Litigation*: Litigation against commercial-scale piracy services continues in jurisdictions such as the United States and in the EU. Countries such as Canada, which lack developed case law in this area, have expressly targeted “enablers” of wide-scale infringement in statutory law.
- *Injunctive relief*: Courts in over twenty countries have granted injunctive relief, by which judicial authorities have ordered that sites dedicated to infringing activities be blocked by Internet service providers (ISPs), and countries in the EU, as well as Australia, Russia and Singapore, have adopted laws to make such injunctions available. In Denmark and Portugal rightsholders and ISPs agreed on voluntary website blocking procedures (in Denmark this involves a court order required against one ISP).
- *Blocking provisions*: Regulators in certain jurisdictions have required economic agents to implement blocking provisions, although they vary in scope and some are being judicially reviewed. The conditions required for delivering such relief are evolving in the EU. According to the latest case law, any limitation on the exercise of fundamental rights needs to be provided for by a law having the necessary degree of detail in order to be proportionate.

- *Cooperation with intermediaries (ISPs, payment processors, advertisers and search engines):*
 - i) *Copyright alert systems:* Countries such as Chile, France, Korea and Taiwan have implemented laws and regulations requiring ISPs to notify subscribers when their account is used to distribute infringing content and warn them of the consequences. According to industry reports, such measures have proved to be effective in some cases.⁸⁸ Canada has introduced a rather different “Notice and Notice” regime. In other countries, like the US and now the UK, such measures have been implemented by voluntary agreement between rightsholder industries and intermediaries as consumer education initiatives.
 - ii) *E-commerce platforms:* The EU, France, Russia and now India have worked with online sales platforms and rightsholders to reduce the sale of infringing items. Individual platforms have adopted differing tools and processes with varying levels of sophistication and success.
 - iii) *Payment processors:* Payment providers have cooperated with rightsholders to ensure that their services are not present on pirate sites. Public authorities such as the Canadian Anti-Fraud Centre⁸⁹ are working with consumers, brands and payment processors to take the money out of counterfeit sales through “chargeback”. In the US, the International Anti-Counterfeiting Coalition (IACC) has launched its Payment Processor Portal, seeking to create a streamlined procedure for its members to report the sale of counterfeit or pirated goods. The IACC has reached agreements with MasterCard, Visa, PayPal, American Express and Discover. In the UK, payment providers can be involved in the City of London’s Operation Creative and industry discussions have also started in France.
 - iv) *DNS Registries and Registrars:* There are active initiatives coming from these communities aimed at tackling abusive use of domain names. The Healthy Domains Initiative has brought together a wide group of registrars, registries and interested parties to set out best practices for handling abuse reports, including on IP. A registrar group from ICANN has also been working on a practices document which it plans to share with wider stakeholders for input.
 - v) *Advertising:* Rightsholder industries have worked with advertisers and advertising intermediaries to prevent advertisements from appearing on pirate sites. Self-regulatory schemes in Austria, Denmark, France and the UK have been launched, with the most developed being the Trustworthy Accountability Group in the US. Self-regulatory regimes are being considered in other countries, including at EU level.
 - vi) *Search:* There remains an ongoing discussion on how search engines can contribute to containing infringement. Search engines respond to takedown requests by rightsholders and courts have ordered removal of entire sites from both local and global search results.⁹⁰ Rightsholders continue to seek de-indexing of sites dedicated to infringement. Search engines have agreed voluntarily to alter their algorithm to downgrade sites dedicated to infringement by taking into consideration the number of takedown requests received for a site. The effectiveness of deprioritisation is being debated. In addition, rightsholders have filed, and intermediaries have processed, tens of millions of takedown requests to require the removal of links to infringing material online using statutory takedown provisions and mechanisms provided by intermediaries, including search engines and providers hosting third-party content. It should be noted that such takedown mechanisms generally do not

⁸⁸ Use of unlicensed peer-to-peer networks in France dropped by 20% following implementation of the law. In New Zealand, P2P levels fell 13% following implementation – IFPI, Recording Industry in Numbers 2013.

⁸⁹ Canadian Anti-Fraud Centre of the Royal Canadian Mounted Police.

⁹⁰ See www.canlii.org/en/bc/bcsc/doc/2014/2014bcsc1063/2014bcsc1063.html.

require such intermediaries to prevent the reposting of removed material – with the exception of a few cases in Germany and Italy. This creates a scenario where rightsholders must repeatedly request removal of new links to or postings of the same unauthorised content. In the EU and the US the law does not impose upon certain neutral intermediaries any general obligation to monitor their networks for infringement, or actively seek out instances of infringement; however, it does not prevent an obligation to check specific content. The way that takedown rules operate is currently under review in both the EU and the US, and the consultations also cover the role of certain platforms in general, including to what extent their activities implicate exclusive rights or are covered by safe harbours.

The appropriate level and form of damages to compensate rightsholders and deter infringement, especially in the online environment, has been a subject of discussion in certain jurisdictions and in trade agreement negotiations. In the US, for example, the level of statutory damages is one of the topics under discussion in the current review of copyright and its enforcement. In addition, the EU is considering legislative changes on enforcement matters.

The introduction of new generic top-level domains (gTLDs) by ICANN, as predicted, has exacerbated the diverse and current issues addressed above. Likewise, the use of trademarks on the Internet raises many issues that are being resolved as the law develops. However, it is of concern that, since national approaches vary, so does the outcome of litigation. One well-known category of issues relates to conflicts arising from contested registrations of domain names identical or similar to trademarks; another relates to new uses of trademarks on the Internet, in applications for mobile devices and in social networks, in many forms that are not all clearly perceptible. Debates also arise from (i) the use of trademarks for advertising purposes, for instance, as keywords to trigger ads alongside algorithmic search engine results for the keyword term, or as pop-up displays on computer screens; (ii) the scope of permitted trademark parody, as an exercise of freedom of speech, on non-commercial websites including blogs; and (iii) the linking and framing of webpages which can also be used for phishing i.e. basically setting up bogus pages to steal users' information.⁹¹

These uses of trademarks on the Internet raise many issues of how an act of trademark infringement should be characterised, which law(s) should be applicable to trademark-related transactions and such infringements, and in which jurisdictions actions can be brought. Courts have generally coped with the question of jurisdiction, but have found understanding the commercial significance of technical processes challenging. Despite these uncertainties, online commerce has thrived and many brand owners use the Internet as a distribution channel for their products and as a tool to manage relationships with customers, while other brand owners seek to control distribution of their products through strictly authorised channels, perhaps even avoiding Internet sales. Online merchants selling authorised goods may increase the competition that established physical merchants face. The rapid growth of e-commerce and social media platforms has highlighted the issue of the scope of protection for brand owners in relation to unauthorised sales on the Internet.

FUTURE PERSPECTIVES | The enforcement challenges faced by copyright and trademark owners is now spreading to designs and patents as cross-border infringement becomes technologically enabled.

Although it seems clear that businesses, governments and private organisations will continue to promote the enactment of increasingly effective means to exploit and protect their IP assets in the digital arena, the enforcement of such rights in this context needs not only to adapt to evolving technologies, but also to find the right balance between the protection of different fundamental rights. This has led to a fair share of interdisciplinary concerns and disputes which will likely continue to be discussed over the following years. Some examples are the interaction between IP rights and data

⁹¹ See section B.V. Domain names.

protection regulations when disclosure of personal data is requested for enforcement purposes, the takedown rules or the “right to be forgotten” in the EU, and the techniques used for and to prevent ad blocking.⁹²

On the other hand, despite business support for ICANN’s Uniform Dispute Resolution Policy (UDRP), it is foreseeable that, in the years to come, there will be a continued call for better consistency of the decisions rendered while applying this policy, as well as efforts aimed to improve the operation of the UDRP or similar procedures for blatant violations of IP rights over the Internet. Other efforts at ICANN include work to allow for reasonable access – through an accurate WHOIS database – to information sufficient to identify alleged infringers, and the enforcement of contractual commitments to ICANN from Registries and Registrars regarding handling of complaints of abuse. However, as noted above, such discussion will have to balance all legitimate interests through multi-stakeholder engagement. Enforcement efforts can be expected to continue to focus on cooperation between governments, rightsholder industries and intermediaries, including intermediary services such as payment providers and advertisers, while giving due regard to the interests and rights of businesses and citizens who face accusations of infringement.

Rightsholder industries will continue to work to develop and implement, in cooperation with intermediaries, copyright alert programmes in a manner that educates consumers about illegal activities and directs them to legitimate services, as they have endeavoured to do through the Copyright Alert System in cooperation with participating ISPs in the United States, although such a system may not be applicable in every jurisdiction.

Governments around the world should ensure effective and meaningful implementation of the 1996 WIPO Treaties in their respective jurisdictions and provide for the enactment and development of appropriate legal frameworks for effective technological protection measures and legal remedies against circumvention, related activities and devices.

IV. COUNTERFEITING AND PIRACY

BACKGROUND | While it is difficult to precisely quantify the impact of counterfeiting and piracy, due to the illicit nature of these activities and differences on the appropriate methodologies, estimates from the Organisation for Economic Co-operation and Development (OECD) and European Union Intellectual Property Office (EUIPO)’s 2016 report on trade in counterfeit and pirated goods suggest that counterfeit and pirated goods in international trade could amount to US\$461 billion in 2013, representing 2.5% of world trade⁹³.

Many industries from a wide range of sectors – ranging from food and beverages, pharmaceuticals, electronics and textiles to software and audiovisual industries – feel a drain from piracy and counterfeiting. Companies view such activities as distorting marketplace competition by making it difficult for them to “compete” against those who take a free-ride on their work, without contributing to costs associated with research, product development and marketing.

Different aspects of these activities also have broader consequences for governments and society.⁹⁴ Trade in counterfeits of products such as medicines, toys, and car or airplane parts, heightens risks to

⁹² See section B.IX.1. Information products (e.g. databases).

⁹³ See *Trade in Counterfeit and Pirated Goods: Mapping the Economic Impact* (2016), dx.doi.org/10.1787/9789264252653-en.

⁹⁴ INTERPOL has made the following statement: “All levels of society are impacted by trafficking in illicit goods. For example, counterfeiting harms businesses which produce and sell legitimate products, governments lose tax revenue from products manufactured or sold on the black market, and consumers are at risk from substandard products.”; see www.interpol.int/Crime-areas/Trafficking-in-illicit-goods-and-counterfeiting/Trafficking-in-illicit-goods-and-counterfeiting .

public health and safety as counterfeits are not subject to the same quality controls and distribution channels as are genuine products. Counterfeiting and piracy on a commercial scale have also been shown to be linked to organised crime⁹⁵, and black market activity in counterfeit or pirated products deprives governments of substantial tax revenues.

Piracy and counterfeiting activities in a country can affect both local as well as international brands and products, with implications for industries and public welfare both inside and outside the country. When making decisions on investment in production or technology sharing in a particular location, businesses will often take into account the likelihood of intellectual property infringement and the efficacy of measures for redress or prevention.

CURRENT LANDSCAPE | Industries based on intellectual property – e.g. patents, trademarks, copyright and trade secrets – have been proactively working to combat piracy and counterfeiting in all its forms. Many sectors have been working closely with law enforcement agencies to investigate and prosecute criminal infringements of intellectual property.

Collaboration between different stakeholders is developing to create, satisfy and protect legitimate expectations, to foster economic growth – particularly jobs – creativity, innovation and competition, as well as to address the issues of counterfeiting and piracy and respect for the law. In addition, several sectors are actively educating governments and the public regarding the roles of all types of businesses – including manufacturers, distributors, publishers and a variety of intermediaries – in fostering and protecting the conditions that promote intellectual property and information-based economic growth. Many stakeholders are educating other stakeholders on how they can best help collaborative efforts to minimise counterfeiting and piracy and promote economic growth.

Businesses are also participating in a wide variety of forums to assess both the consequences of counterfeiting and piracy and the best practices for minimising them. Such efforts must include all stakeholders and must demonstrate respect for and attention to legitimate interests, rights and responsibilities of all participants in the networked economy, including businesses, governments and citizens.

FUTURE PERSPECTIVES | Within industry, continuing dialogue between actors involved in the intellectual property value and distribution chains will facilitate the development of solutions and best practices acceptable to different business stakeholders.

Businesses affected by counterfeiting and piracy are also continuing to work and share information with government agencies and institutions involved in fighting illicit trade and organised crime.

Recent technologies, such as 3D printing and new forms of dissemination of digitalised data, will bring added challenges for businesses in controlling the unauthorised production and distribution of their products and services and the use of their brands. Some businesses are already reviewing the implications of such new technologies on their business strategies and practices.

As systematic data is difficult to obtain on counterfeiting and piracy, because of its generally covert nature, more work on developing tools to gather and analyse data on counterfeiting and piracy across sectors would help increase understanding of the phenomenon and help policy makers take better targeted measures in this area.

⁹⁵ See e.g. *Counterfeiting as an activity managed by transnational organized crime – The Italian case* produced by UNICRI with the support of the Italian Ministry of Economic Development (*Direzione Generale Lotta alla Contraffazione*). This case study maps the involvement in the counterfeit trade of criminal organisations in Italy, highlighting their connections to other criminal groups and the links that exist between counterfeiting and other illicit traffic managed by transnational criminal networks; www.unicri.it/in_focus/on/2013212_Counterfeiting .

ICC CONTRIBUTIONS | ICC's Business Action to Stop Counterfeiting and Piracy (BASCAP) is a member-driven initiative that provides policy and legislative recommendations and advocates for better enforcement of IP rights. BASCAP is a founding partner of the annual Global Congress on Combating Counterfeiting and Piracy, which brings together business and intergovernmental organizations such as INTERPOL, the World Intellectual Property Organization and the World Customs Organization. The group has produced specific IP recommendations for countries including India, Russia, Turkey and Ukraine and promotes essential elements for an effective IP enforcement regime to governments worldwide. BASCAP also promotes recommendations to address vulnerabilities to counterfeiting in free trade zones, goods in transit and intermediary supply chains. BASCAP has also initiated the "Fakes Cost More, I Buy Real" campaign to educate consumers on the social and economic harms of counterfeiting and piracy. BASCAP works together with the ICC Commission on Intellectual Property to promote the value of intellectual property to the economy.

D. Interaction between intellectual property and other policy areas

I. SUSTAINABLE ECONOMIC DEVELOPMENT

BACKGROUND | Sustainable development has been defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”⁹⁶. In a business context, sustainability or sustainable development is often seen as a process whereby companies seek to manage their financial, societal – including governance – and environmental risks, obligations and opportunities. This is commonly referred to as a triple bottom line approach, where business connects to healthy and balanced economic, societal and environmental systems. In order to do so, businesses must be cognisant of the principles of sustainable development, and consider their impacts on the environment in which they operate.⁹⁷

The United Nations 2030 Agenda for Sustainable Development, which sets out 17 Sustainable Development Goals (SDGs) building on the Millennium Development Goals, came into force in 2016.⁹⁸ The SDGs reflect the economic, social and environmental dimensions of sustainable development by aiming not only to end poverty, but also to address social needs and environmental challenges. Innovation, collaboration and governance are key to the integration of these three dimensions of sustainable development.

CURRENT LANDSCAPE | Innovative and creative activity, mainly driven by private sector engagement and investment, will play a crucial role in helping to attain many of the SDGs. Supportive framework conditions, both at national and international level, will be essential to support and incentivise such activity. An important element in this is an effective system for the acquisition and enforcement of intellectual property rights. The IP system plays a central role in supporting innovation by providing investors in inventive and creative activity with legal rights over the intangible assets that result from innovation – such as brands, technology, designs, and creative content – which can help them to secure their investments.

Another important catalyst for attaining the SDGs is collaboration. The IP system provides the legal framework necessary to support collaboration and exchange of knowledge and information, which is essential for the development of new processes, products, services and technologies.

The UN Sustainable Development Goals outline specific objectives towards which the international community has pledged to work. Technological innovation, supported by the IP system, will make an important contribution in achieving many of these. For example, innovations in agriculture will help ameliorate agricultural productivity and food security, and improved energy and water technologies will help increase security and access to sustainable energy and water supplies. Goals relating to the stewardship of the environment will also require innovative solutions, whether in the area of climate change, biological diversity or marine conservation. Innovations in the medical field will also play an important role in working towards a healthier population. Communication technologies have already revolutionised the ability of previously isolated communities to communicate and interact with the rest of the world, opening new economic, educational and other possibilities. Brand protection, underpinned by IP rights such as trademarks, designs and copyright, drives corporate accountability

⁹⁶ See *Our Common Future* (Brundtland report) (1987).

⁹⁷ See *ICC Business Charter for Sustainable Development* (2015), page 5: iccwbo.org/publication/icc-business-charter-for-sustainable-development-2015/.

⁹⁸ See sustainabledevelopment.un.org/post2015/transformingourworld.

and social responsibility and can help encourage sustainable consumption and production patterns, another 2030 Agenda goal.

With respect to the economic dimension of sustainable development, IP clearly plays an important role in creating prosperity and underpins the economy in several countries and regions. A significant part of the world economy and global trade is driven by intangible assets such as brands, technology, designs, and creative content. To a large extent, investments in developing these assets are conditioned by the legal guarantees provided by the IP system, which also supports their use, trade and exchange. The economic dimension of sustainable development is strengthened when markets are fully open and competitive, and provide opportunities for businesses from all countries to engage in the global marketplace. Effective IP protection is instrumental not only in attracting external investment and partnerships, which help increase local technological capacity and technology dissemination, but also in supporting local businesses in their quest for competing in global markets.

Developments in green technology – supported by technology-related IP such as patents, trade secrets, and copyright for software – are likely to make a significant contribution to the environmental dimension of sustainable development (see section D.II. Environmental protection). Changing consumer habits and production practices also play an important role. The branding of goods and services, underpinned by trademarks, designs and copyright, provides a link between consumers and producers that can encourage the latter towards more sustainable production and the former towards more responsible consumption.

Many of the discussions concerning the role of IP in the social dimension of sustainable development are centred around the transfer of technology from more technologically advanced countries to those which are less so, and the building of technological capacity in the latter. In addition to the 2030 Agenda for Sustainable Development, UN deliberations on these issues occur in a multiplicity of intergovernmental fora, including the discussions on Financing for Development, the UN Framework Climate Change Convention, the World Summit on the Information Society (WSIS), the Convention on Biological Diversity (CBD) and the World Intellectual Property Organization (WIPO). A technology facilitation mechanism was also launched at the end of 2015 as an outcome of the Financing for Development and the 2030 Agenda for Sustainable Development processes in order to support the sustainable development goals.⁹⁹

The IP system provides a legal framework which supports technology transfer and dissemination, and the legal guarantees which it offers encourage technological collaboration and the resulting knowledge exchange and capacity building. Business is actively engaged in contributing its expertise and experience in developing and disseminating technologies to relevant international discussions.

FUTURE PERSPECTIVES | In order to make any headway in achieving the Sustainable Development Goals, collaboration between the various stakeholders will be essential. Business is willing to work with governments and other stakeholders, and to actively contribute to the efforts to implement the SDGs as well as to other related intergovernmental processes addressing sustainability issues. However, the multiplicity of UN fora working on similar issues, notably in the area of technology development and transfer, can render meaningful engagement difficult. Efforts to streamline these and provide some clarity as to each of their specific goals and how they interrelate would be welcome. The challenge of integrating global business interests across such diverse platforms is significant, but so too is the challenge of integrating the economic, social and environmental dimensions of development. It is clear that business needs to play a central role as that future unfolds.

⁹⁹ See sustainabledevelopment.un.org/TFM.

Businesses in all countries will also continue to innovate on the ground and to find practical solutions to take sustainable development goals forward. To allow them to do this, they need a supportive policy environment to create and nurture innovation ecosystems, and to build the confidence necessary for investments in innovative activity. This includes predictable, transparent and robust legal and regulatory regimes, a stable macroeconomic framework, a skilled work force, open markets and effective and predictable IP systems. Effective IP systems will also encourage international R&D collaboration and partnerships which help build local capacity and transfer knowledge across borders. In their development policies, governments should consciously aim to put in place the governance and economic infrastructure necessary to support their business innovators in domestic and global markets, including IP systems, and encourage international collaboration and exchange.

Shaping policy that does justice to the economic, environmental and social dimensions of sustainability is not simple. In addressing any one of these dimensions, countries should be wary of not undermining the others. In IP-related policy making, governments should keep in mind the important contribution of the IP system to not only the economic, but also the environmental and social dimensions, by incentivising innovative solutions to environmental and social challenges.

In sum, governments and intergovernmental fora of all types – economic, social and environmental – should recognise and respect the global IP framework as strategically important to sustainable development. IP should be seen as a tool that is part of the solution to sustainable development, not as part of the problem.

ICC CONTRIBUTIONS | ICC contributes to debates on the role of IP in sustainable development through participating in discussions, organising events, and publications. This multi-prong and multi-disciplinary approach includes active leadership of global business in not only the 2030 Agenda for Sustainable Development and the UN Financing for Development processes, but also the major intergovernmental forums shaping the future of the global IP system, such as WIPO and World Trade Organization (WTO), as well as those shaping the future of the environmental and other dimensions of sustainable development, such as United Nations Environment Programme (UNEP), the United Nations Framework Convention on Climate Change (UNFCCC and in its context the United Nations Climate Change Conferences, COP), the Convention on Biological Diversity (CBD) and the World Summit on the Information Society (WSIS). ICC publications on sustainable development include the *ICC Business Charter for Sustainable Development – Business contributions to the UN Sustainable Development Goals*¹⁰⁰, the *ICC Business Charter for Sustainable Development 2015*¹⁰¹ and the *ICC Green Economy Roadmap – a guide for business, policymakers and society*¹⁰².

II. ENVIRONMENTAL PROTECTION

1. Biological diversity

BACKGROUND | The global community is increasingly acknowledging the importance of the natural environment for many reasons, including economic. The Convention on Biological Diversity (CBD, 1993) is one consequence of this tendency. The objectives of the CBD are to conserve biodiversity, to promote its sustainable use and to share in a fair way the benefits of this use. The CBD recognises

¹⁰⁰ See iccwbo.org/publication/icc-business-charter-for-sustainable-development-business-contributions-to-the-un-sustainable-development-goals/ .

¹⁰¹ See iccwbo.org/publication/icc-business-charter-for-sustainable-development-2015/ .

¹⁰² See iccwbo.org/publication/icc-green-economy-roadmap-a-guide-for-business-policymakers-and-society-2012/ .

the sovereignty of member countries over genetic resources (GRs) found within their boundaries, and sets out principles upon which access to genetic resources is to be provided.

A total of 195 countries and the European Union are now parties to the CBD; the US is the only major country that has not ratified it. However, there are still parties to the CBD that have not yet passed laws on access and benefit-sharing requirements. Even where such laws are in place, for those seeking access it is not always clear how to satisfy the respective requirements, or with whom they should negotiate, particularly when indigenous peoples are involved. This ultimately inhibits the access that the CBD seeks to promote.

Ever since the CBD was opened for signature in 1992, different ways have been sought to codify and clarify how the principles of access and benefit sharing are to be implemented in practice. Progress towards this was achieved in October 2010 when the CBD Nagoya Protocol¹⁰³ was adopted after very difficult negotiations. The Protocol requires parties providing GRs and/or associated traditional knowledge (TK) to put in place clear access rules. On the other hand, parties in which such GRs and/or TK are utilised have to put in place measures to monitor such utilisation to make sure that ABS laws of the country providing such GRs/TK are respected. The Protocol also recognises other international agreements on ABS which are in line with its principles, such as the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)¹⁰⁴ and the Pandemic Influenza Preparedness (PIP) framework of WHO, for the sharing of virus samples and resulting benefits.

CURRENT LANDSCAPE | The provisions of the Protocol have been implemented in the EU, Switzerland and some other countries, but it will still take time and effort to implement it in an innovation-friendly, balanced manner in all the other countries which have already become or are in the process of becoming parties to the Protocol.

One proposal for a new requirement – which had been discussed during the negotiations of the Protocol and is still being discussed at WTO and at the WIPO Intergovernmental Committee – is related to intellectual property. It is mainly favoured by developing countries, which believe it would encourage respect for and conformity with the CBD. This proposal requires patent applicants using GRs/TK to indicate the countries providing them or from which they originate, and to provide evidence that they have permission from those countries and have agreed to share benefits with them. Business opposes such a requirement which would impose on patent applicants requirements that lead to legal uncertainty and are incompatible with the patent system. In many cases, patent applicants would not be able to obtain the information requested and thereby not be able to support the goal of ensuring compliance with ABS rules. This may ultimately lead to less use of biodiversity for R&D and result in fewer benefits to share, which would be contrary to the benefit sharing objective of the CBD and the Nagoya Protocol. Finally, alternative approaches exist to combat misappropriation.¹⁰⁵

If the filing of a patent application were to be conditioned on such a requirement, the exploitation of inventions for the general benefit might be seriously impeded, as the uncertainty caused by these demands would seriously discourage research on, innovation with, and exploitation of new inventions that may make a vital contribution to human welfare.

FUTURE PERSPECTIVES | One of the main outstanding issues is whether a so-called Global Multilateral Benefit-sharing Mechanism is needed to ensure fair and equitable benefit sharing derived from the utilisation of genetic resources and associated traditional knowledge in transboundary

¹⁰³ Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising (ABS) from their Utilization to the Convention on Biological Diversity, www.cbd.int/abs/ .

¹⁰⁴ See www.planttreaty.org/ .

¹⁰⁵ See ICC Document *Patent disclosure requirements relating to genetic resources: will they work?*, iccwbo.org/publication/patent-disclosure-requirements-relating-to-genetic-resources-will-they-work/ .

situations or where it is not possible to grant or obtain prior informed consent.¹⁰⁶ The relationship between digital sequence information and the scope of the Protocol has also more recently become a key issue of discussion.

Business will continue to constructively participate in discussions and demonstrate that intellectual property rights are compatible with the protection of the environment and can promote the objectives of the CBD and the Protocol, such as sustainable use of GRs and TK and equitable sharing of benefits.

ICC CONTRIBUTIONS | ICC acts as a focal point for businesses in the CBD/ABS negotiations on the implementation of the Protocol and contributes to related discussions at WIPO and WTO. ICC has issued several papers on related issues.

2. Climate change

BACKGROUND | Climate change is a major challenge but also a fundamentally important opportunity, for business in its role not only as innovator, financier and investor but also as a social partner and employer. Climate change mitigation and adaptation require efforts by all countries, by both the public and private sectors. The global nature of climate change necessitates constant innovation, deployment and technology transfer at an international level to achieve global adaptation and mitigation goals, which require significant investment. The largest contribution to investment and innovation comes from the private sector, while the governments' role is to provide the appropriate institutional frameworks to accelerate and scale up technology development, deployment, cooperation and business investments in these areas. Intellectual property and related institutional frameworks are critical to any technology development and deployment process and provide the basis for providers of technology solutions to invest in continuous technological improvement for the benefit of society. As such, they are an indispensable foundation for international efforts to implement the UN Paris Climate Agreement and other climate-related technology activities, and should be maintained and strengthened to support actions by governments, business and society to respond to climate change. They can also have an important part to play in finding and matching technology needs with available technologies.

CURRENT LANDSCAPE | Technology transfer and climate financing are cornerstones in international climate policies with respect to both mitigation and adaptation. The main intergovernmental forum to discuss and negotiate global solutions to climate change is the United Nations Framework Convention on Climate Change (UNFCCC). The Convention entered into force in 1994 and now counts 196 parties plus the European Union. In 2015, a substantial breakthrough in international climate policies was reached. The Paris Agreement¹⁰⁷, which entered into force on 4 November 2016, marks – together with other climate-related multilateral deliberations and agreements such as the UN 2030 Agenda for Sustainable Development – a new direction in international climate policies with direct and indirect implications for technology and IP, even though IP is not specifically mentioned in the Paris Agreement.

The Agreement's goals are ambitious and complex: Article 2 postulates a global temperature increase of less than 2°C – preferably even 1.5°C – recognising that this would significantly reduce the risks and impacts of climate change; while Article 4 calls for net greenhouse gas emission neutrality in the

¹⁰⁶ See ICC Document *The Need for and Modalities of a Global Multilateral Benefit-Sharing Mechanism* iccwbo.org/publication/the-need-for-and-modalities-of-a-global-multilateral-benefit-sharing-mechanism/.

¹⁰⁷ Paris Agreement under the United Nations Framework Convention on Climate Change (2016), unfccc.int/paris_agreement/items/9485.php.

second half of this century. Attaining these goals will require an unprecedented transformation of business and society, especially with respect to energy provision and use. Furthermore, technology development and deployment will play an essential role in achieving these goals. In climate policies, only approaches with a global dimension can be successful. Article 6, on international collaboration, reflects the fact that it is irrelevant where in the world greenhouse gas emissions are reduced, as long as it truly happens. This makes current discussions on monitoring, verifying and reporting very important. For instance, Article 6 also allows the use of market mechanisms to direct private capital and facilitate access to private technologies to effectively and efficiently combat climate change. The plurality of national approaches also requires robust measures against carbon leakage. This calls for adequate protective national measures, which should not unduly interfere with either access to markets or trade, including in the field of IP.

Two key levers of the Paris Agreement are technology transfer and climate financing. Technology plays an essential role and its availability must be ensured wherever it is needed. Substantial amounts of financing and investment are also required; estimates and pledges are upwards of US\$100 billion per year. An effective response to climate change requires ongoing innovation on a global scale in the coming decades. The international community has already taken a number of steps to help developing countries bridge the technology gap and to assist nations to collectively put in place policies and instruments to both encourage climate-related innovation and develop, commercialise and further disseminate new and existing technologies.

Intellectual property rights play a pivotal role in supporting the transfer and dissemination of technologies. Patents, in particular, provide the primary means for assuring necessary private sector investment in the development and deployment of important technology, particularly clean technology. IP and related instruments also play other relevant roles in technology transfer processes. Patents, for example, provide a good publicly available source of information for identifying technologies and technology holders in order to facilitate and speed up technology transfer. IP rights are thus a prerequisite, not a barrier, to accessing or transferring technology. Stable and effective IP protection is essential to clean technology development and dissemination, and weakening IP frameworks would be counterproductive to these goals.

However, IP as such is neither referred to in the Paris Agreement nor in its adoption text. In particular, the UNFCCC resisted all proposals introducing new IP flexibilities that would make investment more difficult and less predictable. This indicates that IP rights are no longer seen as a critical obstacle or barrier for effective climate policies. This is supported by studies showing the distribution and availability of IP and by documents such as the Technology Needs Assessments (TNA) of developing countries, which do not specify IP rights as a barrier for successful implementation.

The Paris Agreement refers discussions on IP issues to the relevant bodies and expert groups. From the perspective of legal and institutional coherence, and based on the requisite expertise to discuss trade-related IP issues, the WTO TRIPS Council is the appropriate venue for any discussions concerning IP rights. Indeed, discussions on green technology and IP have been on the agenda of the WTO TRIPS Council for several years.

Efforts to transfer clean energy technology to less developed countries, while respecting the intellectual property rights in force, should be intensified, but this depends on the development and maintenance of increasing innovation capacity of both developed and emerging economies.

It should, however, be noted that IP rights have not negatively impacted access to many technologies needed for effective and efficient climate policy implementation. The technologies in question may not

be protected by IP rights at all – e.g. because the IP protection has expired¹⁰⁸ – or may be freely available on the market, even if subject to IP rights, without significant cost premiums due to IP protection. This is especially true for climate change adaptation technologies because many, if not most, of these technologies are already on the market and have been in use for a long time, although not necessarily under the label “adaptation to climate change”, but according to their functionality, such as “flood protection”, “irrigation”, “building technologies”, etc..

Like IP rights, free trade and access to markets with enabling frameworks for investment and climate financing are essential to ensure access to needed climate technologies, and their absence constitutes a significant obstacle. The WTO TRIPS agreement harmonizes IP protection globally as a means to encourage and assure unobstructed free trade.

FUTURE PERSPECTIVES | After the Paris Agreement, the UNFCCC negotiations, governments and businesses are now focusing on the development of the required institutional framework and on ensuring that it can be implemented in practice. Many challenging issues remain on the table. Any efforts to limit or call IP protection into question – whether inside the UNFCCC or in another form – would be counter-productive to meeting the commitments and challenges of the Paris Agreement.

Very important issues under the UNFCCC umbrella are technology transfer and climate financing, which must be substantiated by adequate instruments and dedicated policies. These must be created while bearing in mind not only the requirements of today’s technologies, but also the need to maintain or create an enabling environment for the development and deployment of the technologies of tomorrow. The Paris Agreement strengthens the Technology Framework and provides useful tools such as the Technology Needs Assessments (TNAs) and Technology Roadmaps.

In order to offer an optimal innovation and technology environment, all countries need to define and implement policies that attract innovators from abroad, stimulate R&D at home as well as encourage investment in innovation and collaborative technology partnerships both within the country and across borders. A solid, reliable, and stable legal and administrative environment complemented by appropriate fiscal measures, a skilled workforce, physical infrastructure (roads, ports, pipelines, and transport, reliable access to electricity, or high-speed internet access) and a robust national and global investment and financing infrastructure are very important to allow innovators and entrepreneurs to invest in technology development and commercialisation. Policies to encourage and enable foreign direct investment (FDI) and a robust global market mechanism as a co-financing tool that can assist in integrating a country into global supply chains will help both companies, consumers, and the economy as a whole to move up the innovation value chain.

Innovation in advanced technology also requires consistent investments in education – particularly advanced research institutions – and ongoing training for the workforce, as well as effective policies that enable immigration and allow the integration of skilled foreign workers into the workforce. Measures to promote innovation should also include building capacity to analyse patents and patent databases in order to identify available technology and potential partners. Training and educating local policy makers, workers and consumers will also be an important component of capacity building. Such critical innovation infrastructure enables firms to innovate as well as lays the groundwork for public private partnerships.

¹⁰⁸ See *Patents and Clean Energy: Bridging the Gap between Evidence and Policy* (UNEP, EPO, and ICTSD, 2010); [documents.epo.org/projects/babylon/eponet.nsf/0/cc5da4b168363477c12577ad00547289/\\$FILE/patents_clean_energy_study_en.pdf](https://documents.epo.org/projects/babylon/eponet.nsf/0/cc5da4b168363477c12577ad00547289/$FILE/patents_clean_energy_study_en.pdf).

Finally, translating the positive spirit and ambition of the Paris Agreement into concrete workable approaches through technological solutions will be essential for the Agreement's sustainable implementation.

ICC CONTRIBUTIONS | ICC has a long-standing engagement in the climate arena. It is the coordination umbrella body for business in the UNFCCC negotiations and provides input to new bodies, such as the Technology Executive Committee (TEC), the Climate Technology Centre and Network (CTCN) and the Green Climate Fund (GCF). In the discussions at the international and national levels, ICC shares positive examples of the development, dissemination and use of environmentally sound technologies and highlights policies that create enabling environments for these processes.

ICC has issued a *Green Economy Roadmap*¹⁰⁹ including nearly 60 best practices, and numerous position papers for UNFCCC meetings, highlighting the important role of intellectual property and overall enabling conditions for the transition towards a green economy.

ICC continues to provide critical feedback to governments and Intergovernmental Organisations (IGOs) on the role of IP and enabling environments, including environmental taxation principles and ICC World Trade Agenda (WTA) recommendations on environmental goods and services¹¹⁰.

III. INNOVATION

BACKGROUND | The availability of cost-effective solutions to address global challenges – including health, the environment, job creation, education and food security – will depend on the development and widespread deployment of existing and new technologies. In keeping with past trends, the private sector will likely continue to account for the vast majority of R&D investments, as well as for the majority of expenditures to develop and deploy new, improved technology solutions. Intellectual property rights are critical tools that enable companies to amortise such investments and to assure a return to those who supply the necessary capital.

One trending approach to innovation relates to the concept of “industry 4.0”. This involves automation and data exchange in manufacturing technologies and data processes, in order to continuously improve industrial, accounting, commercial and operational activities and make them more efficient by reducing human intervention. Nanotechnology, artificial intelligence and the Internet of Things (IoT)¹¹¹ are examples of improvements that are making possible the development of industry 4.0. This progress presents new business opportunities and fosters innovative ideas for catering to new market and human needs. Industry 4.0 has the potential to impact our society in the way that the computer revolution – industry 3.0 – did in its time, and is likely to give rise to both new opportunities and challenges in the area of intellectual property.

In a world of increasingly complex technology, new product development depends on the ability to pull together ideas, expertise and innovations from multiple disciplines, entities – both public and private – and countries. To create new products and services in a fast-changing marketplace, many companies find it crucial to be able to share ideas and work closely with partners and even competitors – a form of networked innovation often called open innovation.

¹⁰⁹ See iccwbo.org/publication/icc-green-economy-roadmap-a-guide-for-business-policymakers-and-society-2012/.

¹¹⁰ See *ICC World Trade Agenda – Post-Bali Business Priorities*, iccwbo.org/publication/icc-world-trade-agenda-post-bali-business-priorities/.

¹¹¹ See section B.IX.1 on Information products (e.g. databases).

Open innovation has been facilitated by the digitisation of information, which has also been a critical catalyst for innovation and for the upgrading of many existing technologies. The ability for different entities to work together, sharing their knowledge and partnering to build on existing technologies, must be supported by robust IP protection systems that efficiently protect intangible assets transferred or used during the development and implementation of any project. Dynamic IP systems and licensing models are needed and vital for the confidence of the different actors in the value chain or in the network involved, and for the success of their joint efforts to innovate.

Businesses partner with a range of organisations to leverage resources and benefits to mutual advantage. One key contribution of business is to provide the significant investments often required to develop innovations, identify applications and bring them to market. Government and academic contributions to innovation are frequently in the areas of basic research and demonstration, and bringing the results of such research to the marketplace usually requires large investments from private capital. One highly efficient way to bring government and academic research to the market is through the transfer or licensing of patents and related know-how to the private sector, in order to stimulate the additional investment required, usually made by businesses. Such collaboration can be encouraged by policies that facilitate technological collaboration between public research institutions and businesses, as well as by supportive innovation systems underpinned by IP rights and favourable technology transfer frameworks.

Both private and public investments in R&D are a crucial stimulus for innovative activity¹¹² and positive correlations have been demonstrated between the level of R&D investment and patenting activity (one indicator of innovation). According to an OECD report, which looked at the innovative output of the world's top research and development investors using patents and trademarks as proxy indicators, "the world's top corporate R&D investors (...), accounting for over 90% of global business R&D spending, own 66% of all patent families covering five large IP offices worldwide (IP5)".¹¹³

The business sector, as the primary source of R&D investments, is a key actor in the development, commercialisation and dissemination of technology. Furthermore, the business community has a strong interest in meeting the needs of the growing consumer base in emerging and developing countries. Business is therefore a critical resource for countries seeking to upgrade their technological capacity, and companies are increasingly partnering with governments – as well as private actors – around the world as they work to develop appropriate, cost-effective technology solutions for different customers. Such collaborative activities tend to be concentrated in countries with policy environments that favour innovation and investment, including enforceable IP rights and supportive institutions. In addition to IP, technology investments and technology transfer deals can be supported and incentivised by tax incentives, removal of local content requirements and government procurement restrictions, removal of tariffs and non-tariff barriers (NTBs) and, depending on the situation, even by direct government investment or public procurement policies.

As an important enabler of technology investments and transactions, IP rights support the innovative process and are a key component of enabling environments for foreign direct investment, partnerships and international trade in goods and services. Effective systems of IP protection facilitate technology transfer and the development of local industries, by making it attractive for technology providers to not only invest, but also partner with local actors and share their expertise or know-how. Over time, collaboration results in an upgrade of local capacity and knowledge base, creating a sound foundation for continued technology deployment, innovation and economic growth. In addition to its positive impact on growth and job creation, this process can yield concomitant benefits for the achievement of

¹¹² For further information on how R&D is a crucial stimulus for innovative activity, see www.wipo.int/publications/en/details.jsp?id=4064.

¹¹³ See *World Corporate Top R&D Investors: Innovation and IP Bundles*, www.oecd.org/sti/inno/World_Corporate_Top_RD_Investors_Innovation_and_IP_bundles.pdf.

public policy objectives – e.g. better healthcare through improved medicines and medical devices. IP protection is thus one important component of a policy environment that supports sustained technology diffusion and progress.

The IP system – in particular the patent system – also contributes to making technological developments and trends more transparent, thereby promoting efficiency and competition in innovation. Patent databases provide a rich source of information on developments in all areas of technology worldwide, which allows innovators to build on the most current technological information. The information in patent databases also allows analysis and identification of R&D trends and technology holders, providing insights into technological evolution in specific fields. This stimulates technological progress and competition in innovation, as well as provides intelligence for strategic business decisions.

CURRENT LANDSCAPE | The role of IP in facilitating the transactions that underpin technology diffusion across countries and sectors is not fully recognised by governments in certain countries, notably in developing nations. This may be due to low awareness of the contribution of IP to innovation and to the commercialisation of new products and services, whether such solutions originate in business, government or academia. It could also be due to the reality in many countries – which do not have a functioning basic infrastructure or a sound business environment – where IP systems are not the main consideration for companies deciding where to do business. Because the IP framework enables technology transactions, but is generally not the main driver, even the most robust IP system will not be enough to attract partners in such environments. Also, often certain officials are not fully aware that IP tools are being used, or could be used, by domestic entities to achieve their goals, both domestically and abroad. As more entities in developing countries become innovators in their own right and increase their use of the IP system, the IP scepticism embraced by certain officials may diminish.

FUTURE PERSPECTIVES | Governments seeking to foster the transfer of technology and accelerate the process of building domestic capacity have at times enacted counter-productive policies aimed at forcing technology transfer. Technology diffusion and, most importantly, the dissemination of critical know-how related to technology – which is crucial to the sustained upgrading of the capacity to use and further develop technologies – occurs over time and cannot be forced. Thus, policies aimed at forcing technology transfer – such as compulsory licensing – do not constitute a sound long-term strategy for technological advancement and growth, mainly because businesspeople and investors see this as a huge business risk.

In reality, attempts to force technology transfer – through IP weakening or other policies, together with limitations on market-based deployment of technology solutions – make it less likely that a country will access technology. Such approaches should be avoided or limited to extremely rare short-term situations where there is truly no alternative. The use of compulsory licensing, in particular to obtain commercial advantage for domestic competitors, is ineffective, as it signals to potential technology partners that they should not invest or share what they know in that jurisdiction, lest their IP be appropriated for the advantage of their competitors. Rather than encourage valuable, sustained engagement and partnership, such policies tend to undermine access to existing and new technologies, and to jeopardise further deployment of cutting-edge technology solutions in that country.

Governments should work towards building local innovative capacity and implementing policies that support technology development and dissemination. These include developing a well-trained and educated workforce, providing suitable tax incentives, ensuring effective protection of IP rights through an efficient IP system, providing a legal framework to support market-based licensing of those rights, putting in place regulations favouring investment and trade, and encouraging innovative entrepreneurial projects.

ICC CONTRIBUTIONS | ICC has commissioned a series of research papers on the role of intellectual property in innovation. This research project aims to contribute to a better and more concrete understanding of how IP is actually used in innovative processes so as to help policy makers design IP and innovation-related frameworks that achieve national policy goals more effectively. Topics addressed in the research papers include the role of IP management in SMEs, open innovation, trade secrets, the evolving geography of innovation, and channels for technology transfer and diffusion. More information on this project can be found at iccwbo.org/global-issues-trends/innovation-ip/innovation/.

IV. COMPETITION

BACKGROUND | Tensions naturally exist between competition law (“antitrust law” in the US) and intellectual property rights.¹¹⁴ TRIPS Articles 8.2 and 40 allow WTO members to adopt measures to control anti-competitive practices based on IP rights. WTO, OECD and UNCTAD have set up groups to study such practices but the major legislative activity and antitrust enforcement has been at national or EU level.

In recent years there has been a remarkable expansion of antitrust enforcement in the area of intellectual property and enforcement agencies have identified a number of distinct ways in which the use of IP rights may prove anti-competitive:

- a) A dominant position resulting from ownership of intellectual property may be abused by its owner, for instance by refusing to license the IP to competitors or implementers of the protected technology, by seeking an injunction against infringers of standard-essential patents (SEPs), or by misleading patent offices in order to prevent competitors from entering the market.
- b) A licensor may impose anti-competitive licensing terms on his licensee that restrict either intra- or inter-brand competition, such as restraints on the licensee’s ability to determine the price of its products or services, restraints on certain fields of use, customer restraints, “tying” or non-compete arrangements.

CURRENT LANDSCAPE | In contrast to the European Commission, the US authorities have traditionally taken a somewhat less strict approach in relation to technology licensing agreements. For example, reports by the Federal Trade Commission in 2003, and by the Federal Trade Commission and the Department of Justice jointly in 2007, took the view that intellectual property rights only rarely create monopolies in the antitrust sense and that patent holders may generally refuse to license their technology to others without violating antitrust laws.

In contrast, the European Commission has long promoted the compulsory licensing of IP rights in exceptional market situations. Early cases involved the licensing of copyright-protected listings of television programmes, structuring of market research results and waste recycling. Also, the European Commission has taken enforcement action against Microsoft in relation to its non-release of technical information, and has warned the pharmaceutical industry of its willingness to take action against “defensive patents” – i.e. patents in respect of which the owners were no longer pursuing relevant innovative efforts – if they were being used to block innovation by competitors. Following its investigation into the pharmaceutical sector in 2009, the European Commission has pursued a number of investigations into pay-for-delay or reverse payment agreements between originators and generic firms and has imposed significant fines on a number of IP owners.

¹¹⁴ The relationship between patents and standards is dealt with in section A.II.2.2, Patents and Standards.

The US competition enforcement agencies have issued guidelines for the assessment of potentially anti-competitive licensing agreements and generally apply a “rule of reason” approach¹¹⁵. Under this approach, only agreements that unreasonably restrain trade are found to be in violation of antitrust laws and may, as a consequence, be non-enforceable and attract fines. In this respect, courts analyse whether an agreement’s anti-competitive effects are outweighed by its pro-competitive benefits. For example, depending on the facts of the case, a licensing provision that prevents a licensee from entering into a licence agreement with the licensor’s competitors may be permissible if that agreement is necessary to prevent the licensor’s competitors from free riding on the licensor’s prior research and development. Also, tying in a patent licence may be permissible in the US provided that the patent does not create a dominant position. Further, the imposition of a minimum price at which the licensee is required to sell products manufactured under a license, will be subject to a rule of reason analysis.

In the EU, the European Commission takes a keen interest in potentially restrictive agreements involving intellectual property. On tying, the EU technology transfer guidelines are stricter than the US law: tying may be considered anticompetitive even if the patent does not establish a dominant position. The Commission also takes the view that in principle the setting of a minimum price in relation to products manufactured under an IP licence cannot be justified under the EU competition rules.

The European Commission has issued block exemption regulations in relation to specified classes of agreements whose “safe harbour” provisions provide for an automatic exemption from the prohibition of anticompetitive agreements under Article 101 of the Treaty on the Functioning of the European Union (TFEU).

There are two key EU block exemptions that are of relevance for IP agreements:

- Regulation 1217/2010 on research and development cooperation agreements, which remains in force until 31 December 2022.
- Regulation 316/2014 on technology transfer agreements, which remains in force until 30 April 2026.

Regulation 316/2014 on technology transfer agreements provides for an exemption “by category” from the prohibition of Article 101(1) TFEU on anticompetitive agreements, for certain types of IP licensing agreements. However, the safe harbour is narrowly defined and only applies if the parties’ market shares do not exceed certain thresholds and the agreement does not contain “hardcore” or “blacklisted” restrictions on competition. Significantly, the scope of the exemption differs depending on whether the parties to the agreement are deemed competitors in the affected relevant technology and product markets. For example, if the parties to a technology transfer agreement are considered competitors, the exemption will only apply on the following conditions: the combined market share of the parties does not exceed 20% on the relevant market(s); the agreement does not provide for either price fixing or a number of specific market and customer allocations; and, it does not include clauses that restrict a party’s output, the licensee’s ability to exploit its own technology, or the parties’ ability to carry out research and development – unless that is indispensable to prevent the disclosure of the licensed know-how to third parties.

This Regulation, and the accompanying guidelines, are considerably stricter than the previous EU safe harbour provisions with respect to grant-back provisions, patent pool licences and the right of the IP owner to terminate the licence agreement upon a challenge on the validity of the licensed IP rights.

¹¹⁵ In January 2017 the U.S. Department of Justice and the Federal Trade Commission issued revised Antitrust Guidelines for the licensing of intellectual property.

In particular, the latter provisions are no longer covered by the safe harbour provisions, may be non-enforceable and require individual assessment under the guidelines. These changes have been made in an attempt to “weed out” invalid IP rights, a risk that the European Commission has been increasingly concerned with in the past years.

Importantly, in addition to the abovementioned safe harbour provisions included in Regulations No 1217/2010 and No 316/2014, the European Commission has also issued guidelines in relation to the assessment of agreements that fall outside the scope of the regulations.

In the US, the Leahy-Smith America Invents Act (AIA) – which came fully into force in April 2013 – has addressed relevant weaknesses in US patent law, notably by reducing uncertainty on validity compared with the former “first-to-invent” law, by improving the opportunities for third-party attacks on patents, and by mitigating the provision for triple damages¹¹⁶. Changes with broadly similar intent came fully into force in Australia, also in April 2013, under the IP Laws Amendment (Raising the Bar) Act 2012.

FUTURE PERSPECTIVES | In the EU, the European Commission can be expected to continue to take antitrust enforcement action against IP-related transactions, particularly in the area of standard-essential patents (SEPs). It has already taken a settlement decision in relation to the licensing of SEPs and the seeking of injunctive relief in the mobile telephony sector against Samsung, as well as a prohibition decision against Motorola. Relevant guidance in that area is also provided by the Court of Justice of the European Union’s judgment in Case C-170/13 Huawei v ZTE. In addition, the European Commission will continue to investigate potentially restrictive agreements in the pharmaceutical sector and other areas where IP is important, including in mergers and joint ventures that require approval under the European merger control rules.

ICC CONTRIBUTIONS | ICC has commented on various EU proposals for research and development and on technology transfer, and continues to monitor developments in this area.¹¹⁷

V. INFORMATION SOCIETY

BACKGROUND | Digital high-speed (broadband) networks enable the distribution of digital content and other cultural goods, both in streaming and on-demand formats. Content owners and authorised distributors are rapidly using high-speed networks to provide services and content offerings on different delivery platforms using a variety of business models. New online platforms are driving an explosive growth of creativity online. The growth of legitimate services is challenged by a number of factors, including difficulties in protecting the distribution of content in the high-risk digital environment.

At times, some offer polarised views in this debate – offering absolutist positions about the benefits or harms of protection or limitations on copyright. Of course, intellectual property protection is an essential pillar for the development of electronic commerce and the integration of information and communication technologies. At the same time, it should also be understood that copyright protection does not apply to information, facts or ideas – only the particular form in which they happen to be expressed. It is also important to note that copyright protection is not absolute – it is a right limited in time, and many exceptions to copyright protection already exist in most jurisdictions. Such exceptions are established in accordance with relevant international law and are determined at the level of national laws.

¹¹⁶ Under Section 284 with a new Section 298.

¹¹⁷ See www.iccwbo.org/advocacy-codes-and-rules/areas-of-work/competition/technology-transfer/.

Even with regard to uses where exceptions are not applicable, voluntary solutions – such as flexible licensing of new or pre-existing intellectual property rights – are evolving in forms that preserve the rights granted to the copyright holder while facilitating wider access to such works (e.g. licensing systems such as Creative Commons provide a range of standardised copyright licences that specify what uses are permissible, and whether the content may be distributed or copied).

A well-balanced system that incentivises creators, while providing a balanced system of exceptions and limitations, is supportive of economic growth for a broad range of stakeholders that includes both copyright owners and users, as well as those taking advantage of the exceptions and limitations inherent in the system. With this in mind, it is essential to recall that one of the primary purposes of copyright protection is actually to promote public availability of works that would otherwise not be created or shared with the public at large without a guarantee of the ability to protect them and receive a return on the investment, time, effort and skill required for their production and distribution.

CURRENT LANDSCAPE | The Internet and technology in general have amplified the ways in which content, ideas and information can be disseminated, consumed and created. To address these developments, policy discussions are taking place on different issues, such as Internet governance, data privacy, freedom of expression and, of course, copyright. Legislators and policy makers have always had to grapple with striking a balance between the rights of creators and the interests of users in the context of such new technological developments. Copyright law is inherently flexible to deal with such challenges, provided it is applied within a broader legislative framework that promotes the dissemination of content, recognising that there are many factors beyond intellectual property protection that should be considered in promoting a balanced and productive information society.

Evolving issues in the area of copyright law have an impact on how content is distributed and made available to the public, and these are canvassed more fully in section B.III on copyright.

FUTURE PERSPECTIVES | Business will continue to actively participate in the formulation of Internet policies that have an impact on IP and to promote the message that IP protection fosters the creativity necessary for the development of the Internet, as well as the creation and dissemination of further works to the benefit of the public. Development of business models as well as reliable technical protection carries on.

Businesses have engaged in numerous ventures to make significant amounts of content more easily discoverable and widely available in a secure manner over the entire array of new media platforms. For example, the Copyright Hub is working to facilitate identification of copyright owners via interoperable technical standards and linked databases. Once the copyright owner is identifiable, it should be possible to build automated licensing regimes online which can offer differentiated permissions for use of the copyrighted material. The technology behind it will be open source and independent of any ideology as to how it should be used.¹¹⁸ Other initiatives include the Linked Content Coalition¹¹⁹.

Business should continue to explore opportunities to increase safe and legal accessibility of materials. Business encourages a dialogue focusing on systems for technically secure online distribution of works, and digital rights management (DRM) technology to protect such distribution and foster innovation and creativity.

Governments should adopt policies to foster innovation and creativity on the Internet that include the protection of IP rights. A practical and effective way to achieve this is for governments to ratify and

¹¹⁸ More information on the Copyright Hub at www.copyrighthub.org.

¹¹⁹ See www.linkedcontentcoalition.org/.

accede to the Berne Convention, TRIPS and the WIPO Internet Treaties and to implement and enforce the provisions of these instruments effectively.

The Government Advisory Committee to ICANN should encourage ICANN to adopt policies to foster electronic commerce, including furthering the protection of intellectual property. Governments should support effective enforcement of IP rights and engage in partnerships to permit secure and legal access to content on the Internet.

ICC CONTRIBUTIONS | ICC launched the Business Action to Support the Information Society (BASIS) initiative in mid-2006 to represent business interests and provide business experience to global forums including the Internet Governance Forum (IGF), the Global Alliance for ICT and Development (GAID), the post-World Summit on the Information Society (WSIS) follow-up and implementation activities.¹²⁰

¹²⁰ See iccwbo.org/global-issues-trends/digital-growth/internet-governance/business-action-to-support-the-information-society-basis/.

Notes



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