

EXPANDING THE IP INFORMATION HIGHWAY

Never before has so much information been so easily available to so many people. The Internet has transformed every aspect of our lives, opening up new frontiers of knowledge and new opportunities for innovation and creativity. But ensuring universal access to the technical information contained in patent documents and science journals to enable broad participation in innovation presents significant challenges that underscore the need for effective international cooperation.

Since the birth of the international intellectual property (IP) system in the 1880s, policymakers have emphasized the development of IP's legal architecture. While this is of continuing importance, the international IP community is now also focusing on the benefits that can derive from enhancing IP's technical architecture. Not only will this ensure more efficient delivery of services by IP offices and help reduce the knowledge gap, it promises to enable users to leverage the benefits associated with quick and easy access to IP information.

In a recent interview with WIPO Magazine, WIPO Director General Francis Gurry explained that, "Just as participation in the physical economy requires access to roads, bridges and vehicles to transport goods, similar infrastructure is needed in the virtual and knowledge economy. However, here the highway is the Internet and other networks, bridges are interoperable data standards, and vehicles are computers and databases."

The international IP community's new emphasis on strengthening IP's technical infrastructure stems from various characteristics of the evolving international innovation landscape. These include:

- rising global demand for IP rights that has fuelled a backlog in processing applications, particularly for patents;
- the changing geography of innovation;
- the internationalization of patenting activity and associated expansion in the languages of patent disclosures;
- growing demand by users for access to value-added information on the Internet, and to automated search tools; and
- a commitment to reducing the knowledge gap.

Expanding the IP highway

The widespread availability of the Internet and other information and communication technologies (ICTs) has created an opportunity to build IP networks and to enhance the flow of IP information around the world. Developing and least developed countries increasingly recognize that effective IP systems play a key role in promoting national economic development. Many, with WIPO's assistance, have started to modernize their IP systems and operations using ICTs to digitize their data collections and to deliver enhanced IP services that connect to international IP networks for improved efficiency and work sharing between offices.

Of all the IP rights, patents generate the largest amount of technical work for granting authorities. A more transparent and efficient patent system underpinned by effective work sharing practices is good news for smaller patent offices that do not have the expertise or resources to handle the applications they receive. It also benefits applicants whose principal interest lies in promptly obtaining patent rights that are valid in many countries.

Part of the bargain in the patent-granting process is that applicants must describe how their inventions work. These descriptions, or disclosures, which become freely available to the public, help determine whether a claimed invention satisfies the criteria for patentability – broadly, whether it is new, useful, non-obvious (or has an inventive step) and merits a patent. Patent examiners in the offices of the countries in which protection is sought undertake a search of the "prior art"¹ to establish the novelty and inventive step of a claimed invention.

Today, given the territorial nature of IP rights – whereby they are legally valid only in the country or region in which they are granted – a single inventor seeking to protect a technology in different markets will have to submit multiple patent applications for the same technology.

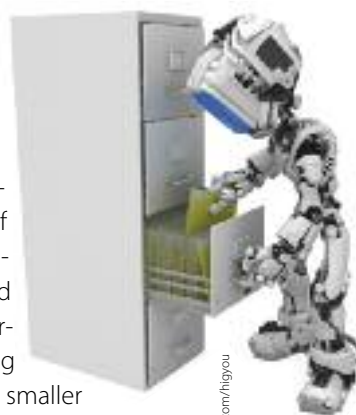


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¹ Prior art constitutes all information made available to the public in any form before a given date that might be relevant to a patent's claim of novelty and inventiveness. If an invention has been described in prior art, a patent on that invention is not valid.



Photo: iStockphoto.com/George Clerk



This process can be greatly simplified by using WIPO's Patent Cooperation Treaty (PCT), which allows an applicant to bundle multiple applications under a single international application and significantly reduces filing fees.² In many instances, however, examiners in each

of the IP offices to which the application is subsequently submitted will undertake their own search³ of the prior art to determine patentability rather than accept the search results generated by a counterpart office. Notwithstanding variations in patent law and policy in different countries, there is much to be gained from bolstering IP's technical infrastructure. Efforts to link up offices, digitize data collections and establish uniform data standards, formats and practices, are being stepped up to reduce duplication and create opportunities for more efficient processing of applications. Various international initiatives are seeking to build on the existing international framework to expand the IP highway, by working to establish common platforms and practices that will enable offices to improve the efficiency and quality of patent search and examination. These initiatives include the patent prosecution highway (PPH) launched by the United States and Japan, various "Foundation Projects" launched by the IP5 group,⁴ and the WIPOCASE platform launched by the Vancouver Group⁵ in cooperation with WIPO.

While WIPO is not involved in all of the many initiatives launched by different groups of countries, as noted by Mr. Gurry, the Organization plays a key role "as a conduit for... results to be made available multilaterally." "In this way," Mr. Gurry continued, "different pieces of the global technical infrastructure will be built and contributed to by different parties, so that, ultimately, we would have a global infrastructure that is built by all, and owned by none."

From paper to digital

IP offices in developing and least developed countries, under pressure from users to provide online

services such as search, registration and filing systems, often face huge challenges in migrating IP data from paper to digital formats. WIPO supports offices of all sizes and from all regions in overcoming these obstacles through a range of advisory services and the provision of auto-

mated software systems, such as IPAS (Industrial Property Automation System), for the administration of IP rights. It also assists IP offices in digitizing their IP records and preparing data for online publication and electronic data exchange. To date, some 70 countries have benefited from WIPO's assistance in the modernization of their IP operations.

Technology & innovation hubs

WIPO is also working with member states to establish Technology and Innovation Support Centers (TISCs),⁶ designed to:

- facilitate access to and support the use of technology databases such as aRDi⁷ and ASPI⁸ to promote use of patent and technological information;
- promote understanding of the value of IP information and the competitive advantages created by IP;
- strengthen the capacity of research institutions in the areas of IP licensing and technology transfer;
- support businesses in developing an IP strategy and using IP valuation tools.

The overarching aim of TISCs is to help reduce the knowledge gap and to demonstrate the practical use of IP information in these countries by developing the skills of local people to extract knowledge from IP data sources.

Building bridges

The challenge in marshalling the evolution of what some consider to be probable – a global master database of IP information that allows users to search in multiple languages – is to ensure its global interoperability and the intercon-

² Offices with limited resources can also benefit from an international search report on the merits of any given application filed under the PCT.

³ Or supplementary search

⁴ IP5 includes the patent offices of China, Europe, Japan, the Republic of Korea (ROK) and the United States.

⁵ The Vancouver Group includes the IP offices of Australia, Canada and the United Kingdom and focuses on issues relevant to mid-sized IP offices.

⁶ TISCs have been established in Algeria, Ecuador, Honduras, Kyrgyzstan, Morocco and Tunisia. Additional centers are planned in Bangladesh, Congo, Cuba, Democratic Republic of the Congo, Dominican Republic, Egypt, Guatemala, Mozambique, Philippines, Senegal and Viet Nam.

⁷ aRDi – Access to Research for Development and Innovation

⁸ ASPI – Access to Specialized Patent Information

About aRDⁱ & ASPI

These databases are designed to facilitate access to targeted scientific and technological information and thereby leverage national innovation and economic development. Rolled out in July 2009, aRDⁱ, a partnership between WIPO and various prominent science and technology publishers,⁹ aims to increase the availability of scientific and technical information in developing

countries. By offering free or low-cost access to some 50 online journals, it seeks to support researchers in creating and developing new solutions to the technical challenges they face.

The ASPI program, launched in September 2010, offers patent offices and research institutions in developing countries free or low-cost access to so-

phisticated tools and services for retrieving and analyzing patent data. ASPI is made possible by a public-private partnership between WIPO and leading patent information providers.¹⁰

Each of these database initiatives was born of WIPO Development Agenda recommendations.

nectedness of databases through a single, WIPO portal. Establishing these “bridges” within the technical infrastructure of IP means countries will need to cooperate to establish international technical standards for data formats, database structures and data exchange protocols.

Vehicles for data integration

The clients of IP offices, especially innovation-oriented companies, increasingly need access to value-added IP information. These resources are particularly important for the strategic management of their IP assets. “For most companies and individuals who develop new technology in their core business, it is just as important to ensure clearance from infringing rights held by others as it is to secure your own exclusive right,” noted Jan Modin, FICPI’s¹¹ Special Reporter on International Patent Issues.

The information disclosed in patents – the “how it works” of technology – is available to the public free of charge from patent offices around the world and is a rich source of valuable technological information. The digitization of patent data collections is opening the door to a wealth of valuable information. Online collections allow researchers, companies, investors and the public to mine this information quickly and easily. “Patent information represents a critical source of knowledge and insight for researchers and innovators, legal professionals, entrepreneurs and policymakers across the globe,” Mr. Gurry commented at the launch of the ASPI program in September 2010.

The information in patent databases allows innovation-oriented companies to:

- optimize research and development (R&D) investment;
- track the latest technological developments;
- identify potential commercial partners;
- monitor the legal status of technologies; and
- develop new and improved inventions and processes by enabling users to selectively combine a range of different technologies.

Patent databases are also key tools for patent examiners in their search and examination activities. The expanding range of languages in which original technical disclosures are made underlines the need for examiners to be able to access a comprehensive source of patent information to reveal all relevant prior art. Access to comprehensive patent databases promises to help improve the quality of patents granted and reduce the risks of their being invalidated following the identification of relevant prior art, post grant.

In response to growing demand for IP information and in a drive to ensure its universal accessibility, WIPO launched, in June 2010, the WIPO GOLD portal, a single online gateway to WIPO’s global collections of up-to-date and fully searchable IP data.

An expanding range of user-friendly database tools enables users to mine the rich sources of information embedded in the IP system – information relating to brands, designs, patents and other types of IP that can contribute significantly to narrowing the knowledge gap and facilitating innovative activity.

⁹ aRDⁱ partners: the American Institute of Physics, Elsevier, John Wiley & Sons, National Academy of Sciences, Oxford University Press, Royal Society of Chemistry, Sage Publications, Springer Science+Business Media, and Taylor & Francis

¹⁰ LexisNexis, Minesoft, Proquest, Questel, Thomson Reuters, WIPS

¹¹ FICPI – International Federation of Intellectual Property Attorneys



WIPO GOLD brings WIPO and the international IP community one step closer to universal, free-of-charge access to IP information.

PATENTSCOPE

WIPO's principal vehicle for facilitating access to the technological information found in patent documents is its PATENTSCOPE database. PATENTSCOPE offers a fully-searchable repository of information relating to over 8 million patent applications. It includes published international applications filed through the PCT, a mechanism which facilitates the process of obtaining patent protection in up to 142 countries. To date, it also includes patent data collections of 17 national patent offices and one regional office. The integration of additional national collections is anticipated. It is also foreseen that the bulk of patent data from IP5 offices will be added this year. PATENTSCOPE is helping to breathe new life into previously inert data sources, and to create a platform for enhanced innovation and technology transfer in the future.

The aim is to continue to expand PATENTSCOPE by integrating additional national and regional patent data collections so that anyone, anywhere in the world, can access this information with the click of a mouse. Supporting countries in the digitization of their patent data collections will also help to enhance the availability and reliability of information about the legal status of patents. This strategically important information is a key factor in determining a company's freedom to operate and in avoiding potentially costly and damaging lawsuits. It also helps to facilitate technology transfer by providing insights into which technology is protected and where, as well as when it is likely to become freely available to the public.

Facilitating multilingual access

Changing patterns of innovation – marked, in particular, by the emergence of northwest Asian countries as significant growth areas – with PCT usage by China, the Republic of Korea and Japan rising from 7.6 percent in 1994 to 29.2 percent in 2009 – and increasing emphasis on open innovation, are fuelling an imperative for the patent system to accommodate greater linguistic diversity.

PATENTSCOPE's enhanced search functionality, known as CLIR (Cross-Lingual Information Retrieval), was developed by WIPO in response to this need. CLIR enables users to find documents written in five different languages (English, French, German, Japanese and Spanish) using queries expressed in one single language. Users will also soon be able to search in Chinese, Korean and Russian.

CLIR's "automatic" search function translates a search term, e.g. "coffee capsule" into five languages and identifies all documents in which it appears. An interface with *Google Translate* then allows for the translation of any given document into a language of choice. The "supervised" function under CLIR also makes it possible to enrich searches by eliminating ambiguities in search terms and honing the categories in which the search is applied, rendering it more accurate and targeted.

When patent offices undertake searches of prior art to establish patentability, the breadth of these searches is limited by the linguistic capacity of examiners and of the search system itself. Search tools such as CLIR offer a useful means of overcoming these constraints. Continuous enhancement of PATENTSCOPE's functionality and data coverage will significantly improve its usefulness as an information resource for offices and users alike.

WIPO's databases are constantly evolving in response to the needs of users. While alone they cannot narrow the knowledge gap, they do provide a rich source of valuable information for inventors, creators, entrepreneurs, researchers, policymakers and lawmakers.

The challenge of strengthening the IP system's international technical infrastructure is a daunting and complex endeavor. Effective international cooperation in this area promises to enable broader participation in the IP system and to enhance the benefits of innovation by greatly facilitating the administration and use of IP rights in the future. WIPO is at the forefront in coordinating international efforts to expand the IP highway and to continue to improve its services to provide better access to knowledge.