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./. Le Bureau international de l'Organisation Mondiale de la Propriété Intellectuelle (OMPI) présente ses compliments et a l'honneur de transmettre ci-joint un exemplaire de la *Revue annuelle du PCT sur le système international des brevets*, également publiée sur l'Internet à l'adresse http://www.wipo.int/ipstats/. Des exemplaires sur papier peuvent être commandés par courrier électronique à l'adresse publications.mail@wipo.int.

Cette revue donne un aperçu du développement et du fonctionnement du système du Traité de coopération en matière de brevets et contient un sujet spécial consacré à l'incidence de l'adhésion au PCT sur les dépôts de demandes de brevet.

Le 3 mai 2013

Pièce jointe: *PCT Yearly Review, the International Patent System*

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WIPO Economics & Statistics Series

2013

PCT Yearly Review

The International Patent System

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PCT SYSTEM IN 2012 – KEY NUMBERS

Number	Trends [1]	Description
507,400	+4.2%	National phase entries[2]
194,400	+6.6%	Applications filed
45,134	+2.3%	Applicants[3]
4,577	+60.8%	PCT-Patent Prosecution Highway Requests
146	+2	Member states
120	-8	Countries in which applications were filed
54.9	+0.2	Share of national phase entries in worldwide non-residents filings (in percent)

1 Trends correspond to annual growth rates in percentage or in volume.
2 The latest available year for PCT national phase entry data is 2011.
3 PCT applicants refer to the first-named applicants in published PCT applications.

HIGHLIGHTS

PCT applications grow by 6.6%

About 194,400 PCT applications were filed in 2012, representing an increase of 6.6% on 2011. This was the third consecutive year of positive growth since the decrease in 2009. The 2012 growth rate was slower than that observed in 2011 (+11%).[4]

The United States of America remains the leading country of origin for PCT applications

Applicants from the United States of America (US) filed 51,207 PCT applications in 2012, representing an increase of 4.4% on 2011. This corresponds to 26.3% of all PCT applications filed. The US was followed by applicants residing in Japan (43,660 applications) and Germany (18,855).

China will most likely overtake Germany in 2013, as its filings grew much faster than those from Germany over the last few years. In 2012, applicants from Japan contributed most to overall growth in PCT filings, with 4,786 more PCT applications filed than in 2011, followed by applicants from China (+2,225 PCT filings) and the US (+2,147).

Large middle-income countries such as Turkey (-16.3%), Mexico (-15.6%), India (-9.2%), South Africa (-5.3%) and the Russian Federation (-4%) saw drops in PCT applications. China (+13.6%) and Brazil (+4.1%) were among the few exceptions.[5]

ZTE files the largest number of PCT applications

ZTE Corporation of China remained the top PCT applicant with 3,906 published applications in 2012. It had almost 1,000 more published applications than Panasonic Corporation of Japan (with 2,951) which ranked second. Both applicants, however, showed the strongest increases, with 1,080 and 488 more published applications in 2012 than in 2011.

The University of California, with 351 applications, remained the largest filer among educational institutions, followed by the Massachusetts Institute of Technology (168) and Harvard University (146). All three institutions are located in the US.

The Commissariat à l'Énergie Atomique et aux Énergies Alternatives of France accounted for the largest number of PCT publications in the government and research institutions category, with 391 published applications. In second place was German research organization Fraunhofer-Gesellschaft zur Forderung der angewandten Forschung E.V. (264) followed by the Centre National de la Recherche Scientifique (CNRS) of France (197). [6]

Electronic machinery overtakes digital communications as the technological field with the largest number of PCT applications

In 2012, electronic machinery - with 13,293 published applications – was the field of technology in which the largest number of PCT applications was published. This was followed by digital communications (12,616 applications), which moved to second position, and computer technology (12,391) in third place.

This is the first time that the top three fields of technology belong to the same sector, namely electrical engineering. This sector concentrated the largest number of filings for half of the top 10 countries of origin. For example, 31.8% of total filings from China were concentrated in the fields of technology within electrical engineering. This share was also high for total applications from the Republic of Korea (23.8%), Sweden (23.6%), Japan (20.4%) and the US (17.5%).[7]

4 For further details see A.1.
5 For further details see A.2.
6 For further details see A.3.
7 For further details see A.5.

PCT national phase entries reach the half-million mark

The number of PCT national phase entries (NPEs) totaled 507,400 in 2011, accounting for a 4.2% increase on 2010.[8] More than half (54.9%) of all applications filed abroad were filed using the PCT system.

Applicants from the US accounted for the largest number of NPEs worldwide, with 144,466, followed by applicants from Japan (96,069 NPEs) and Germany (57.769). All three origins saw growth on 2010 with 0.4%, 5.3% and 3.3%, respectively.

All top 10 middle-income countries - except the Russian Federation (-6.8%) - showed double-digit growth in NPEs, including Malaysia (+92.9%), China (+67%), South Africa (+22.4%) and Brazil (+17.1%). Due to its significant growth, China moved up three places in 2012 to become the ninth country in terms of NPEs initiated worldwide. [9]

8 The latest available data for PCT national phase entries refer to 2011. For further details see A.6.

9 For further details see A.7.

INTRODUCTION TO THE PATENT COOPERATION TREATY

History

The Patent Cooperation Treaty (PCT), an international treaty administered by the World Intellectual Property Organization (WIPO), offers patent applicants an advantageous route for seeking patent protection internationally. Since entering into force in 1978, the PCT has served as an alternative to the Paris Convention for the Protection of Industrial Property (1883) - the Paris Convention - for pursuing the acquisition of patent rights in different countries. Starting with only 18 members, in 2012 there were 146 PCT contracting states.

Advantages of the PCT

Applicants and patent offices of PCT contracting states benefit from uniform formality requirements, international search, supplementary international search and preliminary examination reports, and centralized international publication. Compared to the Paris Convention route, applicants can delay the examination procedures at national patent offices as well as the payment of associated legal fees and translation costs. By deferring national and regional procedures, applicants gain time to make decisions on the potential commercialization of the invention and on the markets in which to seek patent protection.

The reports applicants receive during the international phase concerning relevant prior art and potential patentability of their inventions assist them in making well-informed decisions. The PCT system is designed to reduce unnecessary duplication among patent offices and to support work sharing between those offices; applicants can therefore expect to benefit from time and cost savings, and to receive valuable information.

As shown in the figure "Overview of the PCT System", an applicant must file a PCT application with a receiving office (RO) and choose an International Searching Authority (ISA) to provide an International Search Report (ISR) and a written opinion on the potential patentability of the invention. The International Bureau (IB) of WIPO then publishes the application in its PATENTSCOPE search service. After receiving the ISR and written opinion, the applicant can choose to 1) request a supplementary international search by a Supplementary International Searching Authority (SISA), 2) have an international preliminary examination undertaken on this application by an International Preliminary Examining Authority (IPEA), or 3) take no further action. The applicant has, in general, 30 months from the priority date to decide whether to enter the PCT national phase in the countries or regions in which protection is sought.

PCT Contracting States in 2012

Source: PCT Newsletter, December 2012

International Phase

The international phase usually lasts for 18 months and mainly consists of the filing and formal examination of the application, international search, international publication, optional supplementary international search and optional international preliminary examination. Published PCT applications are accessible, free of charge, via WIPO's online PATENTSCOPE search service.

Filing PCT Applications

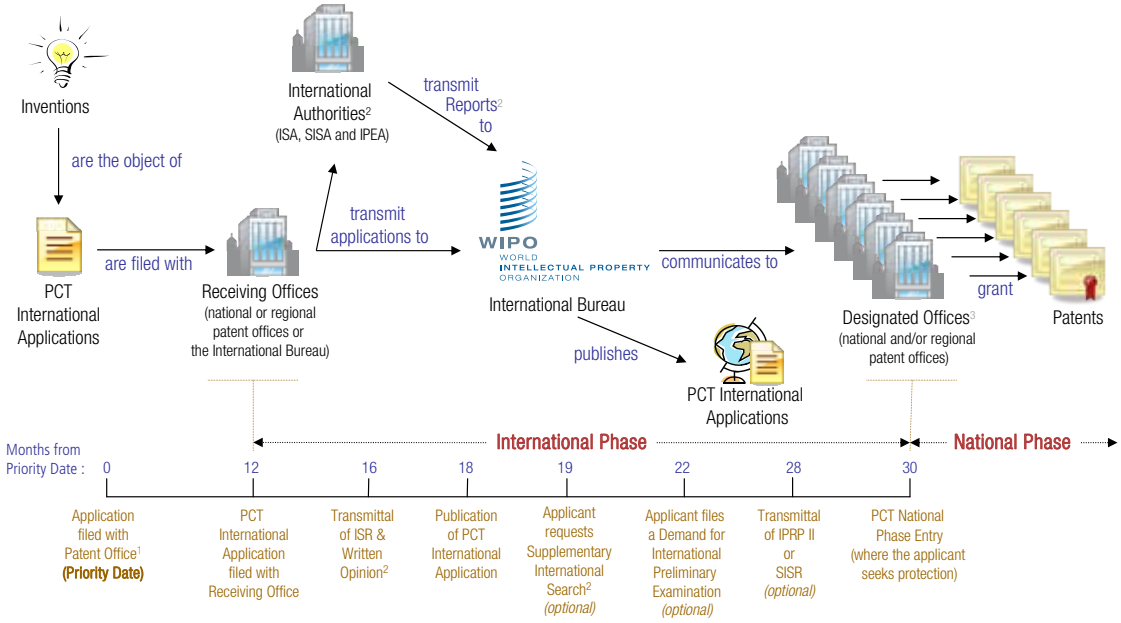
Typically, applicants seeking to protect an invention in more than one country first file a national or regional patent application with their national or regional patent office. Within 12 months from the filing date of that first application (a time limit set by the Paris Convention), they file an international application under the PCT with an RO, i.e., the respective national or regional patent office, or the IB, thus beginning the "international phase". Only a national or resident of a PCT contracting state can file a PCT application.

Because the PCT application has legal effect in all PCT contracting states, applicants effectively postpone the need to file separate applications with each national or regional patent office in which they ultimately wish to have patent protection. It should be noted that an "international patent", as such, does not exist and that the granting of patents remains under the control of national or regional patent offices in what is called the "national phase" (see below).

The RO transmits a copy of the PCT application to the IB, which is responsible for:

- receiving and storing all application documents;
- performing a second formalities examination;
- translating the title and abstract of the PCT application and certain associated documents into English and/or French, where necessary;
- publishing the application and related documents in PATENTSCOPE; and
- communicating documents to offices and third parties.

Overview of the PCT System



[1] Generally, applicants first file a national or regional patent application with their patent office, and within 12 months from priority date, file a PCT application.

[2] International Searching Authorities (ISA) transmit International Search Reports (ISRs) & Written Opinions / Authorities specified for Supplementary Search (SISA) transmit Supplementary International Search Reports (SISR) / International Preliminary Examining Authorities (IPEA) transmit International Preliminary Reports on Patentability II (IPRP II).

[3] Called elected offices for applicants having filed a demand for international preliminary examination.

Source: World Intellectual Property Organization (WIPO), March 2012

International Search

PCT applications are subject to an international search by one of the 15 functioning ISAs,[10] which identify the prior art relevant to the patentability of the invention; establish an ISR; and provide a written opinion on the invention's potential patentability. That opinion can assist the applicant in deciding whether to continue to seek protection for the invention. If the written opinion is unfavorable, the applicant may choose to amend the application to improve the probability of obtaining a patent, or to withdraw the application before incurring additional costs.

Supplementary International Search

Since January 1, 2009, the PCT Supplementary International Search (SIS) service has offered applicants the option to request additional searches from ISAs other than the one that carried out the initial search. This service aims to provide applicants with the option of obtaining a more complete overview of the prior art in the international phase by allowing them to have an additional search performed in an ISA's specialty language. Applicants can request a Supplementary International Search Report (SISR) by a SISA up to 19 months from the priority date.

International Preliminary Examination

After receiving the ISA's written opinion, applicants can request an optional international preliminary examination, i.e., a second evaluation of the invention's patentability, to be carried out by an IPEA – usually on an amended version of the application (all ISAs are also IPEAs). The resulting International Preliminary Report on Patentability (IPRP II) further assists the applicant in determining whether or not to enter the national phase.

National Phase

Under the PCT, applicants have at least 18 months from the date on which the PCT application was filed before entering the national phase at individual patent offices. This 18-month delay affords the applicant additional time – compared to that provided under the Paris Convention – to evaluate the chances of obtaining a patent and to plan how to use the invention commercially in the countries in which protection is sought. In the national phase, each patent office is responsible for examining the application in accordance with its national patent laws and deciding whether to grant patent protection. The time required for the examination and grant of a patent varies across patent offices.

For more information on the PCT, please visit *www.wipo.int/pct/*

10 The national patent offices of Chile, Egypt and India have been appointed as ISAs; however, these offices had not commenced operations in 2012 (the office of Egypt will began operating on April 1, 2013).

DATA DESCRIPTION

For figures on the international phase of the PCT system, data are drawn from the WIPO Statistics Database. The numbers of PCT applications for 2012 are estimates due to the delay in transmitting PCT applications to WIPO. These estimates are made using several statistical and econometric models for major PCT filing countries. For other countries, the estimates are made by adjusting actual received applications according to each country's share of the estimated total PCT filings.

For the national phase of the PCT system, statistics are based on data supplied to WIPO by national and regional patent offices, which WIPO often receives six months or more after the end of the year concerned. The latest available year to date is therefore 2011. Data may be missing for some offices or incomplete for certain origins. Data are available for the majority of larger offices. Only a small share of the patent filing world total is estimated, as the data supplied to WIPO in 2012 corresponded to 98% of the world total. Missing data are estimated using methods such as linear extrapolation and averaging adjacent data points.

The income groups correspond to those used by the World Bank[11] and the groupings by region and subregion are based on the United Nations (UN) definition of regions.[12]

The figures shown in this Review are subject to change.[13]

11 Available at *data.worldbank.org/about/country-classifications/country-and-lending-groups*

12 Available at *unstats.un.org/unsd/methods/m49/m49regin.htm*. Although the geographical terms used by WIPO may differ slightly from those defined by the UN, the composition of regions and subregions remains identical.

13 Regular updates are available at *www.wipo.int/ipstats/*

SPECIAL THEME
HOW PCT ACCESSION AFFECTS PATENT FILINGS

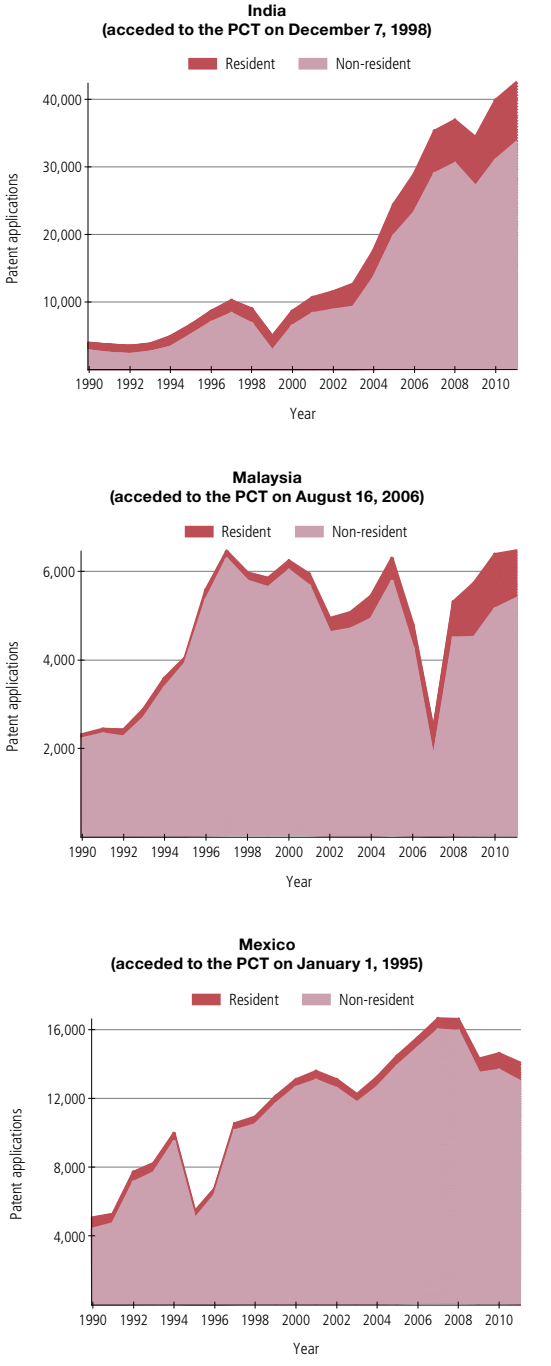
This special theme explores the effects of accession to the PCT system on patent filings at the acceding country's patent office and on filings abroad by that country's residents. It uses the experience of countries that have joined the PCT since the early 1990s.

In a nutshell, the patent office of an acceding country experiences a sharp drop in non-resident filings in the first 18 months after accession. After this period, PCT national phase entries will lead to a recovery of non-resident filings. In addition, patent offices will then receive the vast majority of non-resident filings via the PCT system; resident applicants, in turn, will similarly file a growing number of applications abroad via the PCT system.

The transition phase affects filings at virtually all offices

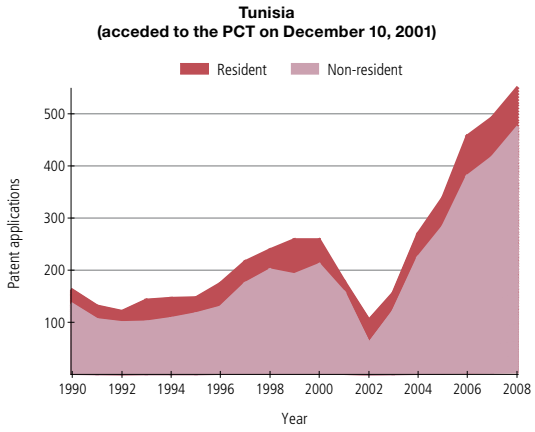
For the year in which a country accedes to the PCT, the number of applications filed at its office typically falls precipitously for a limited period of 18 months – referred to as the "transition phase".[14] In particular, many non-resident applicants take advantage of the extra 18 months afforded by the international phase of the PCT system before deciding whether to pursue a patent application at the national office in question.[15]

Figure 1: Trend in patent filings at selected offices



14 WIPO collects patent filing data from offices on a yearly basis. Therefore, depending on the accession date, the 18-month transition phase can affect patent statistics over three years. For example, Egypt became a PCT member in September 2003. Its transition phase thus affected its patent statistics over three reporting years, which were 2003, 2004 and 2005.

15 If the international application does not claim the priority of an earlier filed application, applicants can take advantage of at least 30 months afforded by the international phase of the PCT system.



Source: WIPO Statistics Database, March 2013

The depth and length of the transition phase varies widely from one office to another (see Figure 1). For example, filings at the offices of Malaysia and Tunisia in the year following PCT accession were, respectively, 62% and 60% lower than in the year prior to accession. The decline was even sharper for the offices of Peru (-80%), Chile (-73%) and Thailand (-71%) all of which became PCT members in 2009 – coincidentally, at the peak of the recent economic crisis. The exception was the State Intellectual Property Office of the People's Republic of China (SIPO), at which filings remained comparatively stable decreasing by only 5% during the same time span.

Offices receive up to half of filings less during transition phase

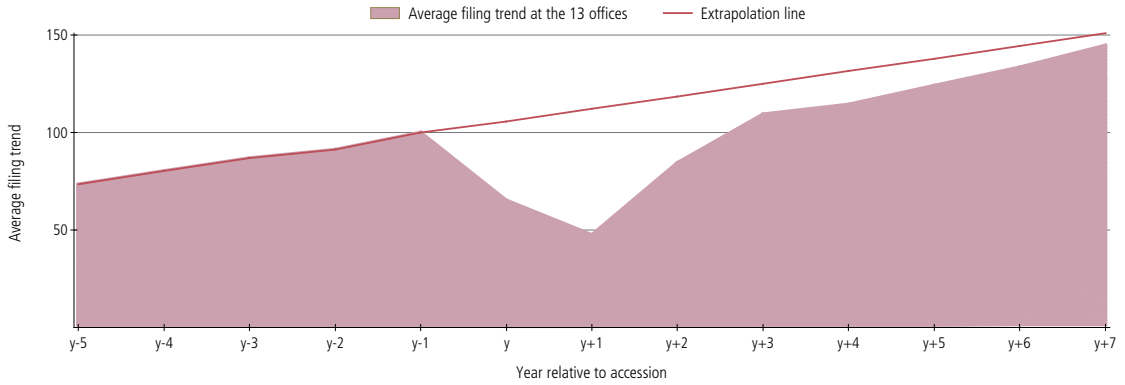
We can compute the average size of the transitory decline using the experience of 13 countries that joined the PCT system between 1990 and 2010, and for which there are sufficient patent filing data – namely, Canada, Chile, Colombia, Egypt, India, Israel, Malaysia, Mexico, Peru, Philippines, Thailand, Tunisia and Turkey.[16] Each country's filing trend is converted into an index with a base value of 100 for the year preceding PCT accession (year "y-1"), and the average index value is calculated across all 13 countries. This average trend is compared to a hypothetical "non-PCT accession" filing trend, which simply extrapolates the growth during the five years prior to accession to the accession year and all subsequent years. Figure 2 shows the resulting trend lines.

Several insights emerge from an analysis of these trends. First, on average, filings decline by about one-half (53%) from the year prior to accession to the year following accession. Subsequently, application volumes recover. However, while growth resumes at a similar pace as in the hypothetical non-PCT scenario, total filing volumes remain somewhat below the non-PCT trend line even seven years after accession.

To better understand the dynamics at work, it is useful to look separately at the filing trends for non-resident versus resident applications.

16 The following periods were used: Canada (1989 to 1995), Chile (2008 to 2011), Colombia (2000 to 2006), Egypt (2002 to 2008), India (1997 to 2003), Israel (1995 to 2001), Malaysia (2005 to 2011), Mexico (1994 to 2000), Peru (2008 to 2011), Philippines (2000 to 2006), Thailand (2008 to 2011), Tunisia (2000 to 2006) and Turkey (1995 to 1999, the year preceding its accession to the European Patent Convention). China was excluded from the analysis as it is, arguably, a special case. SIPO experienced rapid filing growth in the course of PCT accession and beyond; while PCT membership further supported this growth, it is likely that other factors played a more important role. The inclusion of China could therefore have clouded the effects of PCT accession.

Figure 2: Average filing trends (y-1=100)



Note: year preceding PCT accession (y-1):100; y: year the country acceded to the PCT; Average filing trend at the 13 offices: average index value of Canada (1989 to 1995), Chile (2008 to 2011), Colombia (2000 to 2006), Egypt (2002 to 2008), India (1997 to 2003), Israel (1995 to 2001), Malaysia (2005 to 2011), Mexico (1994 to 2000), Peru (2008 to 2011), Philippines (2000 to 2006), Thailand (2008 to 2011), Tunisia (2000 to 2006) and Turkey (1995 to 1999). Extrapolation line: extrapolation of the growth during the five years prior to accession to the accession year and all subsequent years.

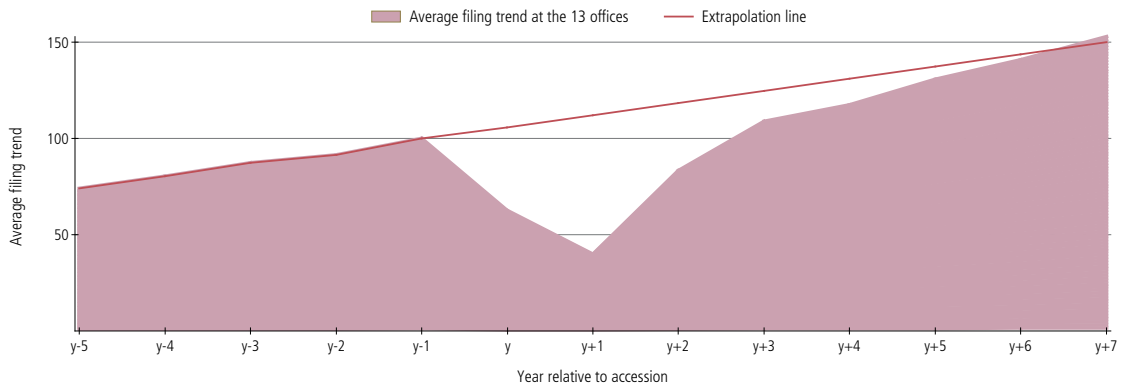
Source: WIPO Statistics Database, March 2013

Soon after accession, non-resident filings pick up quickly but not completely

Figure 3 focuses on non-resident filings, similarly showing the sharp filing decline during the transition phase. Looking only at non-resident filings, the peak-to-trough decline is even more pronounced (60%). Once the transition phase comes to an end, filings do not immediately resume at the hypothetical "non-PCT" level. This is most likely due to a "filtering effect" of the PCT whereby not all of the PCT applications that are likely to have "substituted for" direct non-resident filings enter the national phase at the office of the new PCT member – or, indeed, at any office. For a substantial proportion of PCT filings, applicants choose not to proceed to the national phase, either because of the information provided in the international search report or because new information on the commercial potential of the underlying invention becomes available during the 18-month international phase.

For the 13 countries underlying the trends in Figure 3, non-resident filings surpass the hypothetical non-PCT trend in the seventh year after accession. This could be due to the increased attractiveness of the new member countries as a destination under the PCT, which eventually dominates the filtering effect described above. However, it is important to note that the average trends shown in Figure 3 are specific to the 13 countries included in the analysis. The strength and timing of the effects associated with PCT accession will invariably depend on a variety of factors, such as the size of the domestic market and the national and global business cycle.

Figure 3: Average non-resident filing trends (y-1=100)



Note: year preceding PCT accession (y-1):100; y: year the country acceded to the PCT; Average non-resident trend at the 13 offices: average index value of Canada (1989 to 1995), Chile (2008 to 2011), Colombia (2000 to 2006), Egypt (2002 to 2008), India (1997 to 2003), Israel (1995 to 2001), Malaysia (2005 to 2011), Mexico (1994 to 2000), Peru (2008 to 2011), Philippines (2000 to 2006), Thailand (2008 to 2011), Tunisia (2000 to 2006) and Turkey (1995 to 1999). Extrapolation line: extrapolation of the growth during the five years prior to accession to the accession year and all subsequent years.

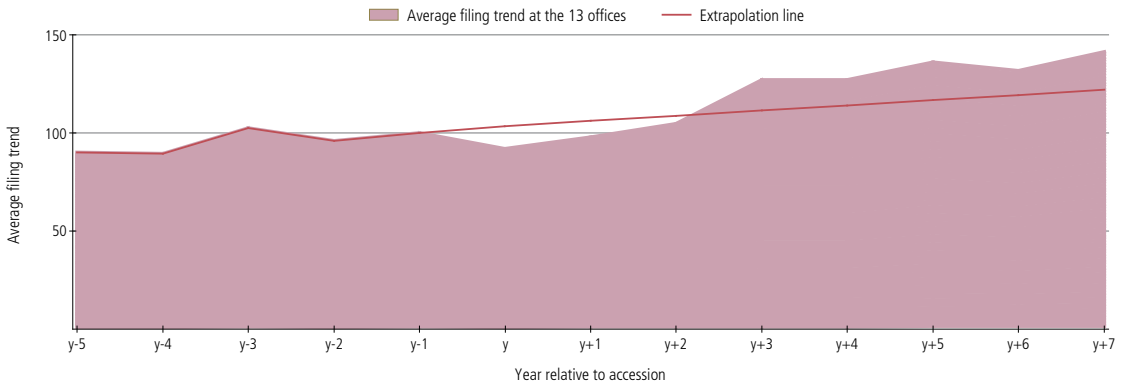
Source: WIPO Statistics Database, March 2013

PCT accession affects part of resident filings

Figure 4 depicts the equivalent trends for resident filings. As one would expect, PCT accession does not have the same dramatic effect on the filing trend. For resident applicants mainly seeking patent protection in their home jurisdiction, PCT accession has little relevance. However, there appears to be a small filing decline during the accession year and in the year after accession relative to the year prior to accession. This transitory decline is observed in 8 of the 13 acceding countries and may well be unrelated to PCT accession. Alternatively, it could be that some resident applicants who first file at an office abroad and only later enter the home jurisdiction take advantage of the 18-month international phase, in a way similar to non-resident applicants.

Following the transition phase, growth in resident filings seems to occur faster than the hypothetical non-PCT filing growth. Again, this may be unrelated to PCT accession.

Figure 4: Average resident filing trends (y-1=100)



Note: year preceding PCT accession (y-1):100; y: year the country acceded to the PCT; Average resident trend at the 13 offices: average index value of Canada(1989 to 1995), Chile (2008 to 2011), Colombia (2000 to 2006), Egypt (2002 to 2008), India (1997 to 2003), Israel (1995 to 2001), Malaysia (2005 to 2011), Mexico (1994 to 2000), Peru (2008 to 2011), Philippines (2000 to 2006), Thailand (2008 to 2011), Tunisia (2000 to 2006) and Turkey (1995 to 1999). Extrapolation line: extrapolation of the growth during the five years prior to accession to the accession year and all subsequent years.

Source: WIPO Statistics Database, March 2013

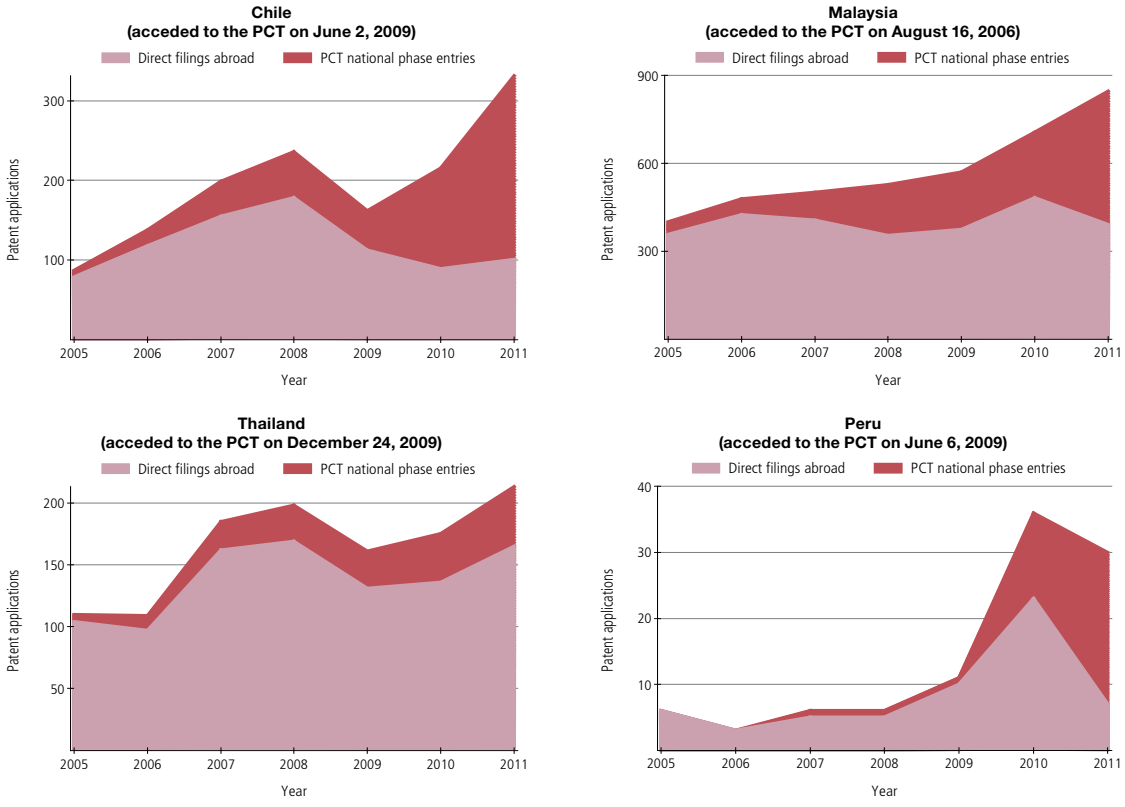
However, it may well be that PCT membership prompts more resident applicants who first file abroad to enter the national phase in their home jurisdiction. Similarly, it could be that PCT membership leads resident applicants who previously did not seek patent protection in their home jurisdiction to first file at home before entering other jurisdictions through the PCT system.

Share of filings abroad using the PCT increases

To what extent do residents of new member countries take advantage of the PCT system? Figure 5 shows filings abroad for residents from four of the acceding countries for which sufficient data were available. It divides applications into direct filings ("Paris route") and PCT national phase entries, thus providing insights into the relative importance of the two routes in applicants' foreign filing strategies.

Prior to accession, residents of the countries in question could only use the PCT system if a co-applicant resided in a PCT member state or an applicant was a national of a PCT member state. However, this situation was exceptional and, accordingly, the PCT only accounted for a small share of total filings abroad. In particular, in the year prior to accession, the share of direct filings abroad for the four origins varied from 75% for Chilean applicants to 90% for applicants from Malaysia. However, in 2011, only applicants from Thailand relied mainly on the direct route (77%). By contrast, applicants from Malaysia, Chile and Peru filed, respectively, 54%, 69% and 77% of their filings abroad using the PCT route. The PCT share in filings abroad for these three origins was above the average 2011 share of 47% for all middle-income countries (see A.7.4).

Figure 5: Trend in patent filings abroad by filing route and selected origins



Note: Data may be incomplete.

Source: WIPO Statistics Database, March 2013

Table 1: PCT applications filed by selected origins

Country of Origin	Date of accession	International Filing Year									
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Angola	December 27, 2007	0	0	0	0	0	0	0	1	0	0
Bahrain	March 18, 2007	2	0	0	0	0	3	1	1	0	2
Chile	June 2, 2009	9	6	9	12	17	27	54	88	118	118
Comoros	April 3, 2005	0	0	0	0	0	0	0	0	0	0
El Salvador	August 17, 2006	0	0	0	0	0	3	3	0	1	0
Guatemala	October 14, 2006	0	0	1	0	1	14	2	2	0	1
Honduras	June 20, 2006	0	0	1	0	0	3	1	0	0	0
Lao People's Democratic Republic	June 14, 2006	0	0	0	0	0	0	0	7	5	9
Libya	September 15, 2005	0	0	0	0	0	1	4	1	0	0
Malaysia	August 16, 2006	31	45	34	61	110	208	224	350	263	292
Malta	March 1, 2007	5	3	11	17	16	25	32	21	19	18
Montenegro	June 3, 2006	0	0	0	2	0	0	0	0	2	0
Nigeria	May 8, 2005	0	0	2	1	1	0	1	2	5	11
Peru	June 6, 2009	2	0	0	1	1	2	10	7	6	11
Sao Tome and Principe	July 3, 2008	0	0	0	0	0	0	0	0	0	0
Thailand	December 24, 2009	9	12	10	11	6	17	20	72	67	60

Note: The figures given for PCT applications filed in 2012 are WIPO estimates.

Source: WIPO Statistics Database, March 2013

Diverse use of the PCT system

Between 2005 and 2010, 16 countries joined the PCT, of which 13 were middle-income countries, two were high-income countries (Bahrain and Malta) and one was a low-income country (Comoros). Table 1 shows the number of PCT applications filed by applicants from these countries from 2003 to 2012.

For three countries – Chile, Malaysia and Thailand – PCT accession prompted a notable increase in the number of filings under the system. These are three upper middle-income economies with considerable innovative capacity. For most other countries, PCT accession did not have the same visible effect. The limited use of the PCT system in these cases is likely to reflect the less developed state of their economies and innovation systems, as well as the availability of regional filing systems that serve the international filing needs of resident applicants.

Conclusion

The impact of a country's accession to the PCT mainly consists of a transitory filing decline at the national patent office, followed by a recovery that eventually catches up with the pre-accession trend. However, due to non-resident applicants "filtering" applications during the PCT international phase, non-resident filing volumes can be below the pre-accession trend for several years following accession.

The transition phase develops quite differently according to the office concerned and its environment. SIPO, which was the fastest-growing office from the 1990s onwards, saw a decrease of 5% between the year following its accession (1995) and the year preceding it (1993). By contrast, the office of Thailand, which became a PCT member in 2009 when patent filings worldwide saw a major downturn, registered a fall of 71% in filings between the year following its accession (2010) and the year preceding it (2008). According to the experience of the 13 offices of new member countries, overall filings declined, on average, by one-half during the transition phase.

Soon after a country has joined the PCT, its applicants usually file most of their filings abroad using the PCT system. Accordingly, the number of PCT international applications has increased for most countries that have joined the PCT, even if filing volumes have in most cases remained modest.

SECTION A
USE OF THE PCT SYSTEM

Part I - International Phase: Filing of PCT Applications

The PCT application data presented in the first part of section A refer to the international phase of the PCT procedure. This section provides a brief overview of the global trend and then focuses on PCT applications by receiving office, country of origin and geographical region. It also contains PCT data by type of applicant and field of technology. Data for selected receiving offices and origins are included in the report. The statistical annex provides data for all offices and origins.

A.1

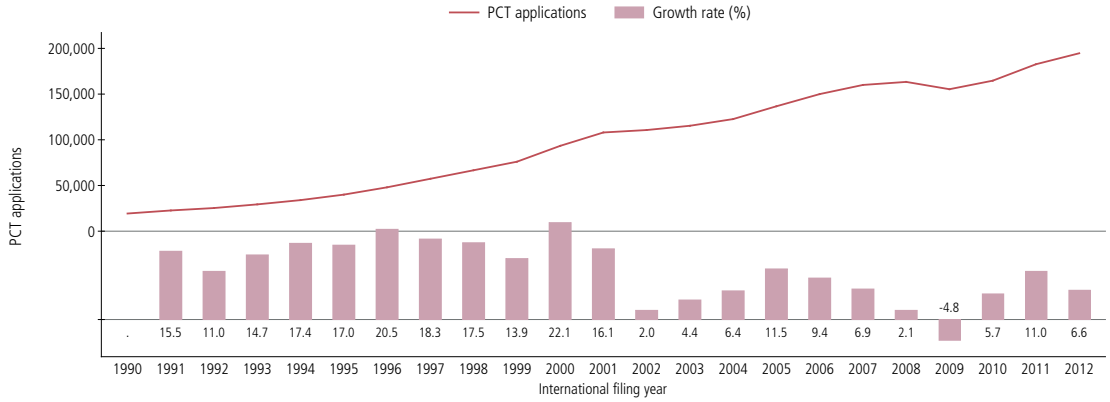
Global Trend

A.1.1 Trend in PCT applications

Figure A.1.1 depicts the number of PCT applications filed since 1990 along with annual growth rates.

An estimated 194,400 PCT applications were filed worldwide in 2012, representing an increase of 6.6% over 2011. This was the third consecutive year of annual growth. The growth rate for 2012 is lower than that observed in 2011, but similar to those seen in 2004 and 2007.

Figure A.1.1: Trend in PCT applications



Note: 2012 data are WIPO estimates.

Source: WIPO Statistics Database, March 2013

A.1.2 PCT applications by receiving office

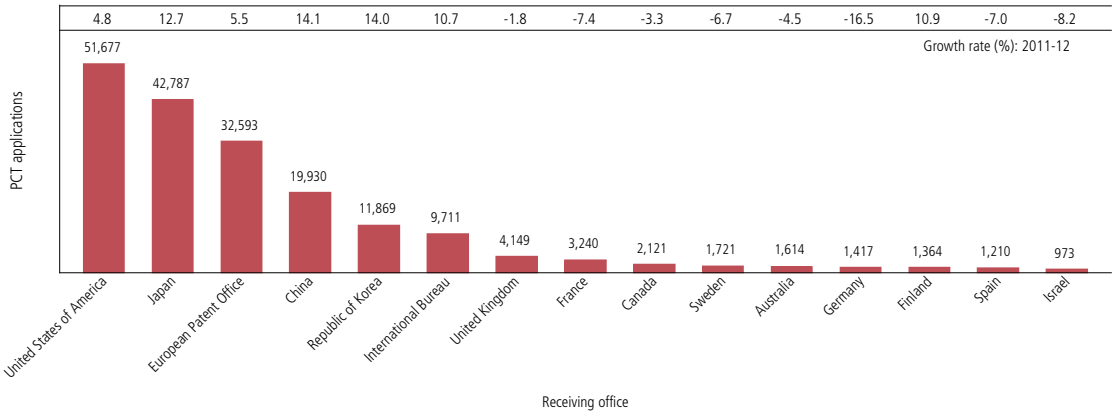
Figure A.1.2 shows the number of PCT applications filed at the top 15 receiving offices (ROs) in 2012. An RO is a patent office, or the International Bureau (IB), with which the PCT application is filed.

With 51,677 filings, the United States Patent and Trademark Office (USPTO) received the most PCT applications in 2012, followed by the Japan Patent Office (JPO) and the European Patent Office (EPO), with 42,787 and 32,593 PCT applications, respectively.

The number of PCT filings at each of the top six ROs increased in 2012 compared to 2011. The strongest annual growth rates occurred at offices in East Asia, namely the State Intellectual Property Office of the People's Republic of China (SIPO) (+14.1%), the Korean Intellectual Property Office (KIPO) (+14%) and the JPO (+12.7%). In 2012, SIPO remained – for the fourth consecutive year – the RO with the highest growth rate out of the top 15 ROs. However the 14.1% growth experienced by SIPO represented a significant slow down from previous years (61% and 35% growth in 2010 and 2011 respectively). This partly reflects the sharp increase in Chinese filings since 2009, as an enlarged filing base naturally reduces relative growth rates.

Of the top 15 ROs, eight saw a decrease in PCT filings compared to the previous year. The offices witnessing the sharpest declines in PCT filings were those of Germany (-16.5%), Israel (-8.2%), France (-7.4%) and Spain (-7%).

Figure A.1.2: PCT applications for top 15 receiving offices, 2012



Note: 2012 data are WIPO estimates.

Source: WIPO Statistics Database, March 2013

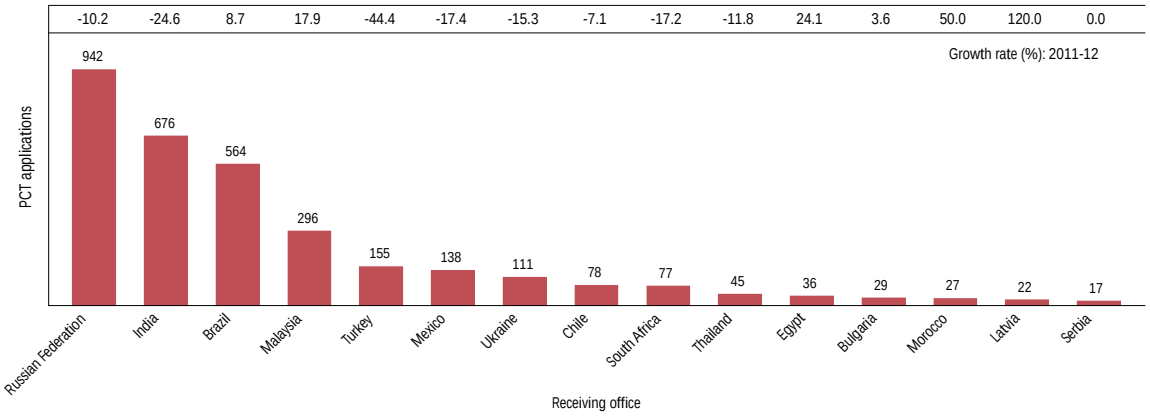
A.1.3 PCT applications by receiving office of middle-income countries

Figure A.1.3 provides the number of PCT applications filed at the top 15 middle-income countries. China is not included in this graph as it appears in Figure A.1.2, but also because of the significant difference between the number of PCT applications received by SIPO and by the ROs of other middle-income countries. This report uses the World Bank income classification based on gross national income per capita to refer to particular country groups. See Data Description for further information.

In 2012, the offices of the Russian Federation, India and Brazil received 942, 676 and 564 PCT applications, respectively. Several offices saw substantial decreases in filings compared to 2011, such as Turkey (-44.4%), India (-24.6%), Mexico (-17.4%) and South Africa (-17.2%). Altogether, eight out the 15 offices shown in Figure A.1.3 received fewer PCT applications in 2012 than in 2011. Among the top five middle-income offices, Malaysia and Brazil are the only two offices that received more filings in 2012 than in the previous year, experiencing growth of 17.9% and 8.7%, respectively.

As for all PCT applicants, applicants from middle-income countries can choose to file their PCT applications with the RO of the IB of WIPO. For some countries, such as the United Arab Emirates or Nigeria, the IB is the only competent RO. In 2012, the IB in its capacity of RO received 1,183 PCT applications from middle-income countries. This corresponds to 12.2% of all applications filed at this office (Figure A.1.2). Among middle-income applicants, applicants from India - with 443 filings - filed the most PCT applications with the IB, followed by applicants from South Africa (219) and China (128).

Figure A.1.3: PCT applications for top 15 receiving offices of middle-income countries, 2012



Note: 2012 data are WIPO estimates.

Source: WIPO Statistics Database, March 2013

A.2

PCT Applications by Origin

This subsection provides PCT application data by country and region of origin. Counts are based on the international filing date and country of residence of the first-named applicant. The grouping of PCT data by geographical region and subregion is based on the United Nations (UN) definition of regions. Data for selected origins are reported here, and a statistical table containing all origins is provided in the annex.

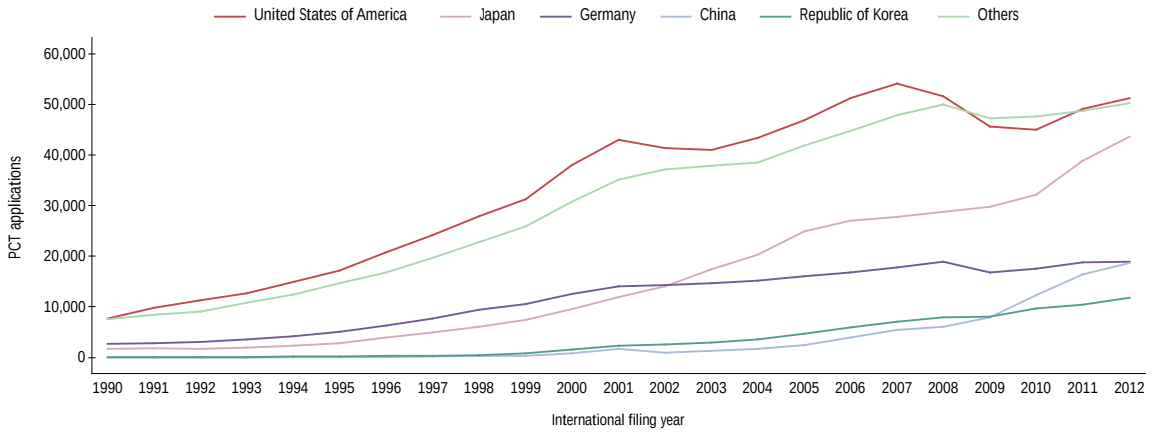
A.2.1 Trend in PCT applications for the top five countries of origin

Figures A.2.1.1 and A.2.1.2 describe the trend in PCT filings, both by volume and distribution, for the top five countries of origin.

In 2012, the US remained the country which was the source of the highest number of PCT applications. However, as shown in Figure A.2.1.2, its share of total PCT filings has been decreasing since the mid-1990s. This is also the case for the share of German filings. Historically, Germany ranked second in terms of PCT filings until Japan surpassed it in 2003.

The share of East Asian countries in total filings has significantly increased over the past two decades. Japan accounted for almost 25% of PCT filings in 2012, whereas China will most likely overtake Germany in 2013. The combined share of the top five origins represented 74.2% of PCT applications filed in 2012. This is almost one percentage point higher than their 2011 share (73.3%) and nearly five percentage points more than their 2008 share (69.4%). The concentration in filings among the top five origins was, in 2012, the highest of the past two decades.

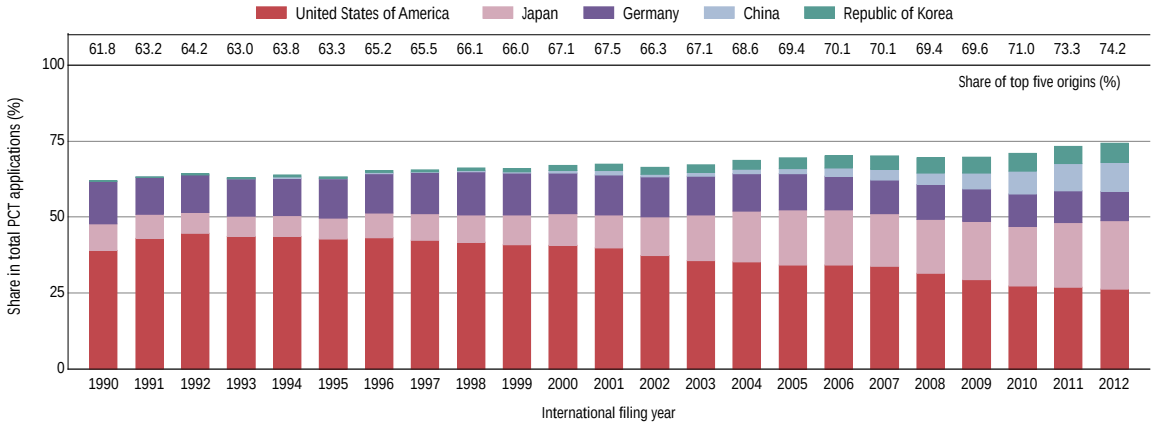
Figure A.2.1.1: Trend in PCT applications for the top five origins



Note: 2012 data are WIPO estimates.

Source: WIPO Statistics Database, March 2013

Figure A.2.1.2: Share of top five origins in total PCT applications



Note: 2012 data are WIPO estimates.

Source: WIPO Statistics Database, March 2013

A.2.2 PCT applications by country of origin

Table A.2.2: PCT applications for the top 15 origins

Country of Origin	Year of Filing						
	2008	2009	2010	2011	2012	2012 Share (%)	Change compared to 2011 (%)
United States of America	51,643	45,628	45,029	49,060	51,207	26.3	4.4
Japan	28,760	29,802	32,150	38,874	43,660	22.5	12.3
Germany	18,855	16,797	17,568	18,851	18,855	9.7	0.0
China	6,120	7,900	12,296	16,402	18,627	9.6	13.6
Republic of Korea	7,899	8,035	9,669	10,447	11,848	6.1	13.4
France	7,072	7,237	7,246	7,438	7,739	4.0	4.0
United Kingdom	5,467	5,044	4,891	4,848	4,895	2.5	1.0
Switzerland	3,799	3,672	3,728	4,009	4,194	2.2	4.6
Netherlands	4,363	4,462	4,063	3,503	3,992	2.1	14.0
Sweden	4,136	3,568	3,314	3,462	3,585	1.8	3.6
Italy	2,883	2,652	2,658	2,695	2,836	1.5	5.2
Canada	2,976	2,527	2,698	2,945	2,748	1.4	-6.7
Finland	2,214	2,123	2,138	2,079	2,353	1.2	13.2
Australia	1,938	1,740	1,772	1,739	1,708	0.9	-1.8
Spain	1,390	1,564	1,772	1,729	1,687	0.9	-2.4
All Others	13,725	12,655	13,346	14,298	14,466	7.4	1.2
Total	**163,240**	**155,406**	**164,338**	**182,379**	**194,400**	**100.0**	**6.6**

Note: 2012 data are WIPO estimates.

Source: WIPO Statistics Database, March 2013

Applicants residing in the US filed 51,207 PCT applications – or 26.3% of all PCT filings - in 2012, representing an increase of 4.4% on 2011. With 43,660 applications filed, applicants from Japan filed 22.5% of all PCT applications. When combined, filings originating in the US and Japan accounted for almost half (48.8%) of all PCT applications in 2012. Germany and China filed similar numbers of applications, with 18,855 and 18,627, respectively.

In 2012, applicants from Japan contributed most to overall growth in PCT filings, with 4,786 more PCT applications filed than in 2011, followed by applicants from China (+2,225 PCT filings) and the US (+2,147).

The Netherlands had the highest growth rate among the top 15 origins, with a 14% increase in filings on 2011, followed by China (+13.6%), the Republic of Korea (+13.4%), Finland (+13.2%) and Japan (+12.3%). Among these top 15 origins, only three filed fewer applications in 2012 than in 2011, namely Canada (-6.7%), Spain (-2.4%) and Australia (-1.8%).

A.2.3 PCT applications by middle-income country of origin

Table A.2.3 shows PCT applications filed since 2008 at the top five middle-income countries in each geographical region.

Applicants from middle-income countries filed 23,508 PCT applications in 2012, corresponding to an increase of 9.2% on 2011. The increase in filings from China (+13.6%) accounted for this growth, as it offset the decrease in filings from several other middle-income countries such as Ukraine (-22.7%), Turkey (-16.3%), Mexico (-15.6%) and India (-9.2%). When excluding China from the total count, the number of PCT applications filed by middle-income countries decreased by 4.6% in 2012.

On a global level, the vast majority of middle-income filings (79.2%) originated in China. At the regional level, the majority of filings also originated in a single middle-income country. China accounted for 89.8% of middle-income filings from Asia, while the Russian Federation was the source of 77.9% of all filings from European middle-income countries, and South Africa constituted 71.1% of all African middle-income filings. Latin America and the Caribbean (LAC) was the geographical region least dominated by a single country, as only slightly more than half of these filings (53%) were concentrated in Brazil, followed by Mexico and Chile, which accounted for substantial shares of total LAC filings with 17.1% and 10.6%, respectively.

Table A.2.3: PCT applications for top five middle-income origins by region

Region	Middle-income origin	International Filing Year					2012 Middle-income Regional Share (%)	Change compared to 2011 (%)
		2008	2009	2010	2011	2012		
Africa	South Africa	391	375	295	319	302	71.1	-5.3
	Egypt	42	33	48	33	41	9.6	24.2
	Morocco	15	24	20	19	31	7.3	63.2
	Namibia		4	30	19	12	2.8	-36.8
	Seychelles	17	9	10	3	9	2.1	200.0
	Others	28	32	25	38	30	7.1	-21.1
	Total	**493**	**477**	**428**	**431**	**425**	**100.0**	**-1.4**
Asia	China	6,120	7,900	12,296	16,402	18,627	89.8	13.6
	India	1,072	961	1,286	1,330	1,208	5.8	-9.2
	Turkey	392	389	480	539	451	2.2	-16.3
	Malaysia	208	224	350	263	292	1.4	11.0
	Thailand	17	20	72	67	60	0.3	-10.4
	Others	83	109	118	126	107	0.5	-15.1
	Total	**7,892**	**9,603**	**14,602**	**18,727**	**20,745**	**100.0**	**10.8**
Europe	Russian Federation	763	711	798	996	956	77.9	-4.0
	Ukraine	94	79	109	141	109	8.9	-22.7
	Bulgaria	28	25	33	28	31	2.5	10.7
	Latvia	18	24	26	17	36	2.9	111.8
	Serbia	37	26	19	19	20	1.6	5.3
	Others	59	81	63	75	76	6.2	1.3
	Total	**999**	**946**	**1,048**	**1,276**	**1,228**	**100.0**	**-3.8**
Latin America and the Caribbean	Brazil	472	492	488	564	587	53.0	4.1
	Mexico	203	194	191	225	190	17.1	-15.6
	Chile	27	54	88	118	118	10.6	0.0
	Colombia	37	63	46	57	73	6.6	28.1
	Ecuador	4	4	33	33	45	4.1	36.4
	Others	99	75	54	88	95	8.6	8.0
	Total	**842**	**882**	**900**	**1,085**	**1,108**	**100.0**	**2.1**
Oceania	Samoa	5	6	5	2	1	50.0	-50.0
	Marshall Islands			1		1	50.0	
	Vanuatu		1					
	Total	**5**	**7**	**6**	**2**	**2**	**100.0**	**0.0**
Total		**10,231**	**11,915**	**16,984**	**21,521**	**23,508**		**9.2**

Note: 2012 data are WIPO estimates.

Source: WIPO Statistics Database, March 2013

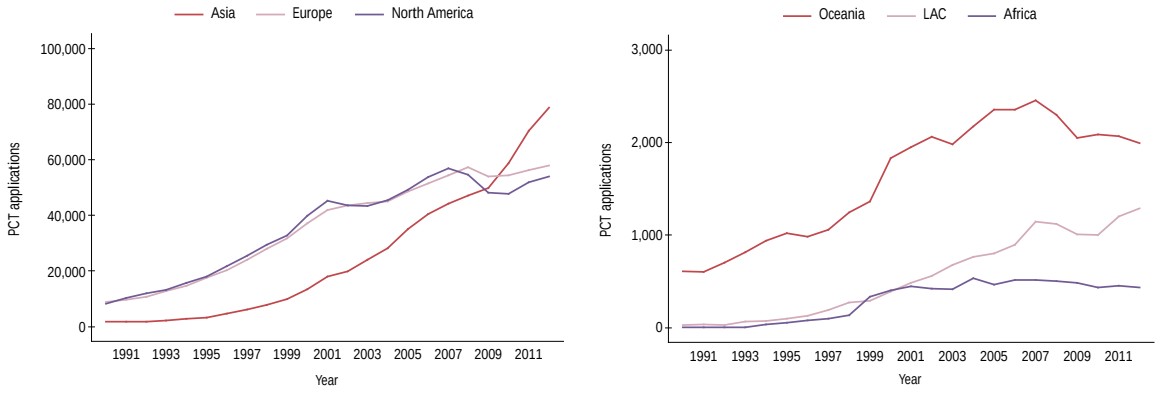
A.2.4 PCT applications by region of origin

Figure A.2.4 depicts the number of PCT applications filed by each region since 1990.

Since 2009, Asia has been the region filing the highest number of PCT applications. Its numbers have increased every year since 1991, with substantial growth seen since 2009. In 2012, Asian countries filed 78,800 PCT applications, representing growth of 12% on 2011.

Asia is followed by the regions of Europe and North America, which filed 57,904 and 53,955 PCT applications, respectively, in 2012. With an increase of 7.1% on 2011, the LAC region experienced the highest growth in PCT filings after Asia. This contrasts with Africa (-4.2%) and Oceania (-3.7%) which were the only two regions in which the number of PCT filings fell compared to 2011.

Figure A.2.4: Share of PCT applications by region of origin



Note: LAC: Latin America and the Caribbean. 2012 data are WIPO estimates.

Source: WIPO Statistics Database, March 2013

A.2.5 PCT applications by subregion of origin

Table A.2.5 shows PCT applications filed from 2008 to 2012 according to the subregion of origin of the applicant.

With 78,800 filings, Asia was the region filing the largest number of PCT applications in 2012. It was also the region experiencing the highest annual growth, with an increase of 12% on 2011. Of all Asian filings, 94% originated in East Asia, primarily in China, Japan and the Republic of Korea. East Asia accounted for 38.1% of PCT applications filed globally in 2012.

Europe was the second region in terms of PCT filings. It accounted for 57,904 applications in 2012, of which 88% originated in Northern and Western Europe combined. North America was close behind with 53,955 filings, or 27.8% of total PCT filings.

The filings from Africa, LAC and Oceania combined accounted for only 1.9% of the 194,400 PCT applications filed worldwide. Among them, LAC is the only region that experienced an increase in filings on 2011, with 7.1% growth. This significant growth mainly originated in South America (+65 filings) and the Caribbean (+50 filings), both compensating for the decrease in filings observed in Central America (-30 filings).

Table A.2.5: PCT applications by subregion of origin

Region	Subregion	International Filing Year					2012 Share (%)	Change compared to 2011 (%)
		2008	2009	2010	2011	2012		
Africa	Eastern Africa	23	19	17	25	19	0.01	-24.0
	Middle Africa	5	10	6	8	3	0.00	-62.5
	Northern Africa	75	75	81	66	81	0.04	22.7
	Southern Africa	392	379	326	340	314	0.16	-7.6
	Western Africa	5	2	6	13	16	0.01	23.1
	Total	**500**	**485**	**436**	**452**	**433**	**0.22**	**-4.2**
Asia	East Asia	42,789	45,740	54,119	65,728	74,138	38.14	12.8
	South-central Asia	1,091	1,007	1,329	1,369	1,243	0.64	-9.2
	South-eastern Asia	841	870	1,109	1,048	1,115	0.57	6.4
	Western Asia	2,450	2,118	2,153	2,235	2,304	1.19	3.1
	Total	**47,171**	**49,735**	**58,710**	**70,380**	**78,800**	**40.53**	**12.0**
Europe	Eastern Europe	1,412	1,386	1,528	1,789	1,747	0.90	-2.3
	Northern Europe	14,423	13,326	12,807	12,936	13,476	6.93	4.2
	Southern Europe	4,730	4,735	4,886	4,834	4,960	2.55	2.6
	Western Europe	36,793	34,497	35,143	36,696	37,721	19.40	2.8
	Total	**57,358**	**53,944**	**54,364**	**56,255**	**57,904**	**29.79**	**2.9**
Latin America and the Caribbean	Caribbean	302	147	118	147	197	0.10	34.0
	Central America	244	216	203	246	216	0.11	-12.2
	South America	577	643	684	811	876	0.45	8.0
	Total	**1,123**	**1,006**	**1,005**	**1,204**	**1,289**	**0.66**	**7.1**
North America	Northern America	54,619	48,155	47,727	52,005	53,955	27.75	3.7
	Total	**54,619**	**48,155**	**47,727**	**52,005**	**53,955**	**27.75**	**3.7**
Oceania	Australia/New Zealand	2,296	2,041	2,081	2,067	1,990	1.02	-3.7
	Melanesia		1				0.00	
	Micronesia			1		1	0.00	
	Polynesia	5	6	5	2	1	0.00	-50.0
	Total	**2,301**	**2,048**	**2,087**	**2,069**	**1,992**	**1.02**	**-3.7**
Unknown		168	33	9	12	27	0.01	
Total		**163,240**	**155,406**	**164,338**	**182,377**	**194,400**	**100**	**6.6**

Note: 2012 data are WIPO estimates.

Source: WIPO Statistics Database, March 2013

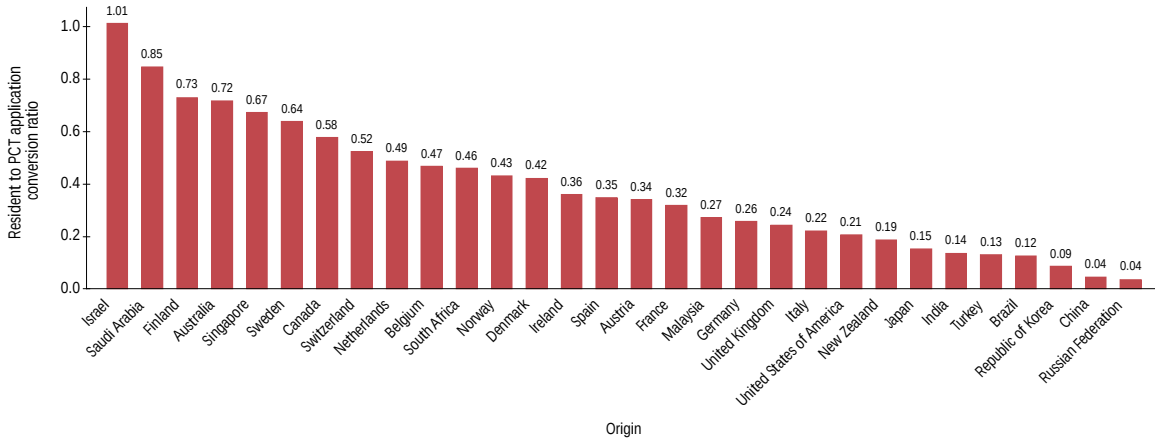
A.2.6 PCT applications as a share of resident patent applications

Figure A.2.6 reports a hypothetical "conversion ratio" that seeks to reflect the proportion of resident patent applications converted into PCT applications. Formally, the conversion ratio is defined as the total number of PCT applications divided by the total number of resident applications (including regional applications). Resident application data are lagged by one year due to the fact that applicants have up to 12 months from the filing date of the earlier national filing to submit a PCT application.[17] For example, to derive the conversion ratio for Australia, its 2012 PCT applications (1,708) are divided by the 2011 resident applications (2,383), which is equal to 0.72.

In theory, the conversion ratio should be between zero and one. However, for several countries, the conversion ratio exceeds one due to the fact that certain PCT applications do not have priority claims associated with prior resident filings. For example, an Israeli applicant may forgo filing an application at the Israeli Patent Office, but opt to file a first application at the USPTO, after which it is converted into a PCT application.

In 2012, applicants from Israel (1.01), Saudi Arabia (0.85), Finland (0.73) and Australia (0.72) had the highest conversion ratios. By contrast, less than 10% of resident applications filed by applicants from the Republic of Korea (0.09), China (0.04) and the Russian Federation (0.04) were converted into PCT applications. The conversion ratios of the top two PCT filers, Japan (0.15) and the US (0.21), increased by 0.02 and 0.01, respectively, on 2011.

Figure A.2.6: Conversion ratio of resident patent applications to PCT applications, 2012



Note: The ratio is defined, for the top 30 origins, as PCT applications filed in 2012 divided by resident patent applications (including regional applications) filed in 2011. 2012 PCT data are WIPO estimates.

Source: WIPO Statistics Database, March 2013

17 Strictly speaking, the calculation of the conversion ratio should be based on "first" filings at national offices (i.e., excluding "subsequent" filings). However, the data collected from most patent offices do not distinguish between first and subsequent filings. The data reported in Figure A.2.6 are, therefore, based on total resident patent filings.

A.3

PCT Applicants

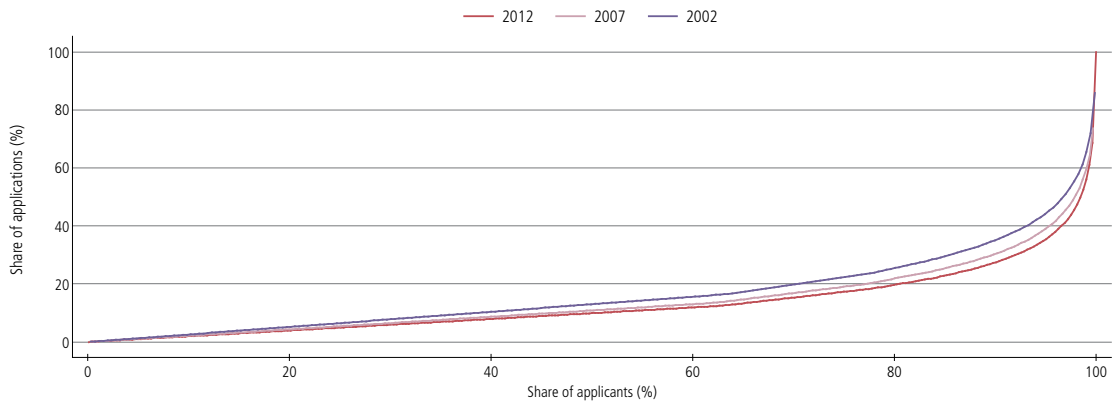
This subsection provides data on the distribution of PCT applicants, PCT applications by ownership type and top PCT applicants. PCT applications by type of applicant are based on international filing date and the country of residence of the first-named applicant. For reasons of confidentiality, the top PCT applicant list is based on the publication date.[18]

A.3.1 Distribution of PCT applicants

Figure A.3.1 shows the distribution of PCT applicants for published PCT applications. In 2012, the 178,212 PCT applications published belonged to about 45,134 applicants.

Precisely 20% of PCT applicants accounted for 80% of applications published in 2012, showing that the vast majority of PCT applicants file only a few PCT applications. In 2002, the same share of applicants (20%) filed only 74.5% of PCT applications, indicating that the top PCT filers constitute an increasing share of applications over time.

Figure A.3.1: Distribution of PCT applicants and published PCT applications, 2012



Note: Counts are based on corporate applicants only (thus excluding natural persons). Due to confidentiality requirements, PCT data are based on publication date.

Source: WIPO Statistics Database, March 2013

18 For the majority of PCT applications, the difference between the international filing date and the publication date is approximately six months.

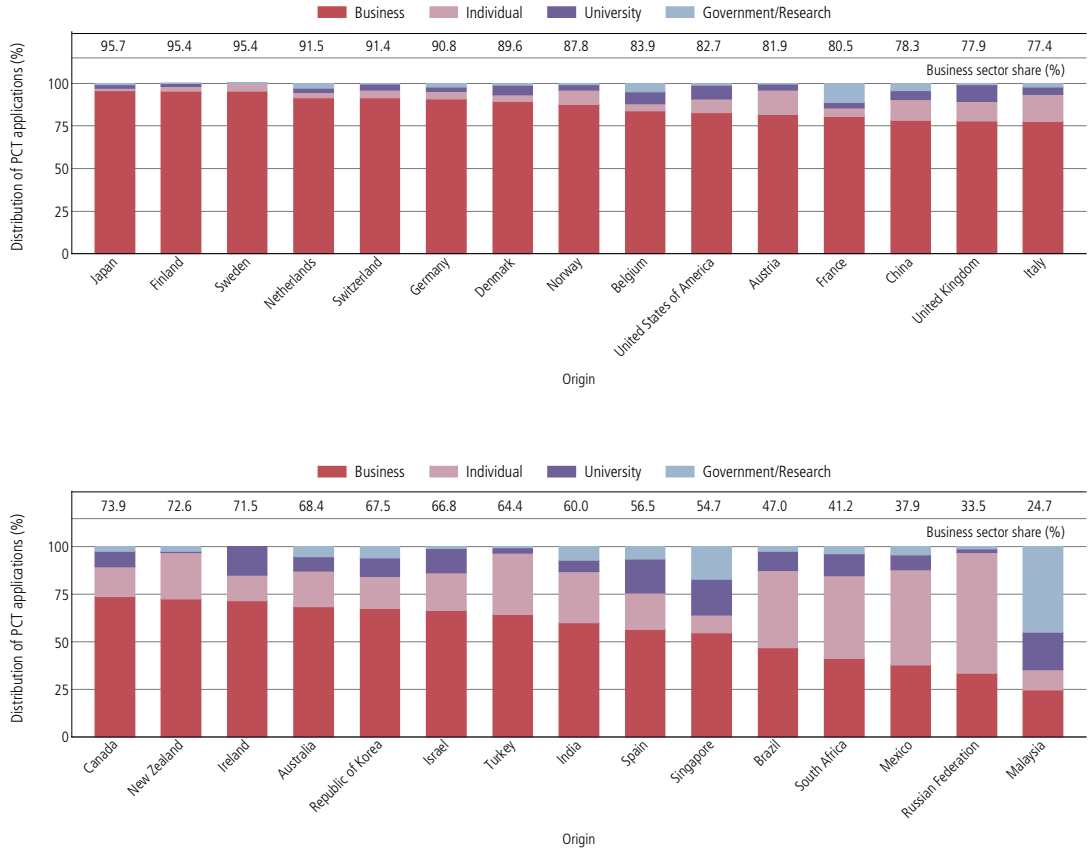
A.3.2 Distribution of PCT applications by type of applicant

The distribution of PCT applications for the top 30 origins broken down by four types of applicant – businesses, universities, government and research institutions, and individuals – are presented in Figure A.3.2.

In 2012, business-sector applicants accounted for 83.8% of published PCT applications, followed by individuals, universities and government and research institutions, with 8.3%, 5.4% and 2.5% of published applications, respectively. However, the distribution varied greatly across origins. Businesses accounted for more than 95% of PCT applications belonging to residents of Japan, Finland and Sweden. By contrast, the business sector accounted for about a third of PCT applications filed by applicants from the Russian Federation and a quarter of those filed by applicants from Malaysia.

Individuals accounted for a majority (63%) of applications originating in the Russian Federation. Universities accounted for a large share of applications for Malaysia (19.7%), Singapore (18.9%) and Spain (17.6%), whereas government and research institutions represented a high share of PCT applications originating in Malaysia (45%), Singapore (17%) and France (11.2%).

Figure A.3.2: Distribution of PCT applications by type of applicant for top 30 origins, 2012



Note: Government and research institutions include private non-profit organizations and hospitals. The university sector includes all educational institutions. Due to confidentiality requirements, PCT data are based on publication date.

Source: WIPO Statistics Database, March 2013

A.3.3 List of top PCT applicants: businesses

ZTE Corporation of China remained the top applicant in 2012 with 3,906 published applications, almost 1,000 more than Panasonic Corporation of Japan (2,951 published applications) which ranked second.

Most of the top 50 applicants reported growth in published applications in 2012 compared to 2011. The top two applicants also showed the strongest increases in published applications, with 1,080 and 488 more published applications, respectively. LG Electronics (-242) and Qualcomm (-189) recorded the largest declines in published applications.

With 22 companies, Japan had the largest number of applicants ranked among the top 50 applicants, followed by 13 applicants from the US and 5 from Germany.

Table A.3.3: Top 50 PCT applicants: businesses

Rank	Applicant's Name	Origin	PCT applications			Change compared to 2011
			2010	2011	2012	
1	ZTE CORPORATION	China	1,868	2,826	3,906	1,080
2	PANASONIC CORPORATION	Japan	2,153	2,463	2,951	488
3	SHARP KABUSHIKI KAISHA	Japan	1,286	1,755	2,001	246
4	HUAWEI TECHNOLOGIES CO., LTD.	China	1,527	1,831	1,801	-30
5	ROBERT BOSCH CORPORATION	Germany	1,302	1,518	1,775	257
6	TOYOTA JIDOSHA KABUSHIKI KAISHA	Japan	1,095	1,417	1,652	235
7	QUALCOMM INCORPORATED	United States of America	1,675	1,494	1,305	-189
8	SIEMENS AKTIENGESELLSCHAFT	Germany	830	1,039	1,272	233
9	KONINKLIJKE PHILIPS ELECTRONICS N.V.	Netherlands	1,433	1,148	1,230	82
10	TELEFONAKTIEBOLAGET LM ERICSSON (PUBL)	Sweden	1,147	1,116	1,197	81
11	LG ELECTRONICS INC.	Republic of Korea	1,297	1,336	1,094	-242
12	MITSUBISHI ELECTRIC CORPORATION	Japan	726	834	1,042	208
13	NEC CORPORATION	Japan	1,106	1,056	999	-57
14	FUJIFILM CORPORATION	Japan	275	414	891	477
15	HITACHI, LTD.	Japan	372	547	745	198
16	SAMSUNG ELECTRONICS CO., LTD.	Republic of Korea	574	757	683	-74
17	FUJITSU LIMITED	Japan	475	494	671	177
18	NOKIA CORPORATION	Finland	632	698	670	-28
19	BASF SE	Germany	817	773	644	-129
20	INTEL CORPORATION	United States of America	201	309	640	331
21	HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P.	United States of America	564	591	620	29
22	3M INNOVATIVE PROPERTIES COMPANY	United States of America	586	563	586	23
23	SONY CORPORATION	Japan	347	471	578	107
24	MITSUBISHI HEAVY INDUSTRIES, LTD.	Japan	391	480	566	86
25	SUMITOMO CHEMICAL COMPANY, LIMITED	Japan	323	446	558	112
26	SANYO ELECTRIC CO., LTD.	Japan	129	285	537	252
27	MICROSOFT CORPORATION	United States of America	470	446	531	85
28	INTERNATIONAL BUSINESS MACHINES CORPORATION	United States of America	416	661	528	-133
29	CANON KABUSHIKI KAISHA	Japan	379	499	480	-19
30	MURATA MANUFACTURING CO., LTD.	Japan	305	318	462	144
31	E.I. DUPONT DE NEMOURS AND COMPANY	United States of America	452	424	457	33
32	BOSCH-SIEMENS HAUSGERATE GMBH	Germany	371	421	448	27
33	GOOGLE, INC.	United States of America	171	224	421	197
34	PROCTER & GAMBLE COMPANY	United States of America	359	488	413	-75
35	YAZAKI CORPORATION	Japan	76	205	402	197
36	KABUSHIKI KAISHA TOSHIBA	Japan	319	517	397	-120
37	BAKER HUGHES INCORPORATED	United States of America	307	336	396	60
38	APPLE COMPUTER, INC.	United States of America	182	269	388	119
39	KYOCERA CORPORATION	Japan	279	356	353	-3
40	LG CHEM, LTD.	Republic of Korea	203	214	352	138
41	SCHAEFFLER TECHNOLOGIES AG & CO. KG	Germany			347	347
42	ALCATEL LUCENT	France	275	287	346	59
43	HONDA MOTOR CO., LTD.	Japan	309	418	341	-77
44	NOKIA SIEMENS NETWORKS OY	Finland	345	332	326	-6
45	GENERAL ELECTRIC COMPANY	United States of America	274	291	320	29
46	DOW GLOBAL TECHNOLOGIES INC.	United States of America	288	399	317	-82
47	NISSAN MOTOR CO., LTD.	Japan	113	174	308	134
48	NITTO DENKO CORPORATION	Japan	128	195	306	111
49	NTT DOCOMO, INC.	Japan	298	323	303	-20
50	ASAHI GLASS COMPANY, LIMITED	Japan	180	291	302	11

Note: Due to confidentiality requirements, PCT data are based on publication date. Top applicants are selected according to the 2012 total.

Source: WIPO Statistics Database, March 2013

A.3.4 List of top PCT applicants: universities

The University of California remained the largest filer among educational institutions with 351 published applications in 2012, followed by Massachusetts Institute of Technology (168) and Harvard University (146). Only seven applicants had more than 100 applications published in 2012. The University of California was the only educational institution that ranked among the overall top 50 PCT applicants in 2012.

The number of applications published in 2012 compared to 2011 increased for the majority of applicants. The University of California saw the strongest increase in published applications (+74), followed by Peking University (+63). By contrast, the University of Michigan (-37) and Tokyo University (-32) saw the largest drops in published applications.

The US dominates the list of top university applicants, with 27 out of these 52 applicants, followed by Japan and the Republic of Korea with 6 each.

Table A.3.4: Top 50 PCT applicants: universities

Rank	Applicant's Name	Origin	PCT applications			Change compared to 2011
			2010	2011	2012	
1	UNIVERSITY OF CALIFORNIA	United States of America	304	277	351	74
2	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	United States of America	146	179	168	-11
3	HARVARD UNIVERSITY	United States of America	91	88	146	58
4	JOHNS HOPKINS UNIVERSITY	United States of America	89	111	141	30
5	COLUMBIA UNIVERSITY	United States of America	91	82	114	32
5	UNIVERSITY OF TEXAS SYSTEM	United States of America	129	127	114	-13
7	SEOUL NATIONAL UNIVERSITY	Republic of Korea	97	99	101	2
8	LELAND STANFORD JUNIOR UNIVERSITY	United States of America	54	79	95	16
9	PEKING UNIVERSITY	China	26	29	92	63
10	UNIVERSITY OF FLORIDA	United States of America	107	84	89	5
11	CALIFORNIA INSTITUTE OF TECHNOLOGY	United States of America	50	59	88	29
12	KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY	Republic of Korea	51	103	82	-21
13	CORNELL UNIVERSITY	United States of America	81	88	73	-15
14	UNIVERSITY OF TOKYO	Japan	105	98	66	-32
15	YONSEI UNIVERSITY	Republic of Korea	38	43	65	22
16	TSINGHUA UNIVERSITY	China	24	36	62	26
16	ISIS INNOVATION LIMITED	United Kingdom	46	62	62	0
18	KYOTO UNIVERSITY	Japan	47	70	61	-9
19	UNIVERSITY OF MICHIGAN	United States of America	79	96	59	-37
20	PURDUE UNIVERSITY	United States of America	50	41	57	16
21	TOHOKU UNIVERSITY	Japan	41	51	56	5
22	UNIVERSITY OF UTAH	United States of America	59	50	55	5
23	NATIONAL UNIVERSITY OF SINGAPORE	Singapore	24	50	54	4
24	POSTECH FOUNDATION	Republic of Korea	31	36	50	14
25	NANYANG TECHNOLOGICAL UNIVERSITY	Singapore	22	29	49	20
26	STATE UNIVERSITY OF NEW YORK	United States of America	32	40	48	8
27	UNIVERSITY OF NORTH CAROLINA	United States of America	42	43	47	4
27	KYUSHU UNIVERSITY	Japan	27	41	47	6
29	TEL AVIV UNIVERSITY	Israel	39	43	46	3
29	UNIVERSITY OF PENNSYLVANIA	United States of America	76	64	46	-18
29	WISCONSIN ALUMNI RESEARCH FOUNDATION	United States of America	47	46	46	0
29	HANYANG UNIVERSITY	Republic of Korea	46	50	46	-4
33	UNIVERSITY OF SOUTHERN CALIFORNIA	United States of America	47	38	45	7
33	INDIAN INSTITUTE OF TECHNOLOGY	India	8	20	45	25
35	UNIVERSITY OF ILLINOIS	United States of America	59	47	44	-3
35	KOREA UNIVERSITY	Republic of Korea	27	60	44	-16
35	UNIVERSITY OF COLORADO	United States of America	34	47	44	-3
35	OSAKA UNIVERSITY	Japan	60	59	44	-15
35	ARIZONA STATE UNIVERSITY	United States of America	64	55	44	-11
35	IMPERIAL INNOVATIONS LTD.	United Kingdom	37	35	44	9
41	OHIO STATE UNIVERSITY RESEARCH FOUNDATION	United States of America	32	30	43	13
41	INDIANA UNIVERSITY	United States of America	37	34	43	9
43	HEBREW UNIVERSITY OF JERUSALEM	Israel	43	51	41	-10
44	ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE	Switzerland	23	32	40	8
45	DUKE UNIVERSITY	United States of America	48	51	39	-12
45	UNIVERSITI SAINS MALAYSIA	Malaysia	10	16	39	23
47	TOKYO INSTITUTE OF TECHNOLOGY	Japan	26	43	38	-5
49	EMORY UNIVERSITY	United States of America	34	25	37	12
49	YALE UNIVERSITY	United States of America	24	37	37	0
51	CAMBRIDGE UNIVERSITY	United Kingdom	35	40	36	-4
51	DANMARKS TEKNISKE UNIVERSITET	Denmark	24	36	36	0
51	NEW YORK UNIVERSITY	United States of America	26	34	36	2

Note: The university sector includes applications from all types of educational institutions. Due to confidentiality requirements, PCT data are based on publication date. Top applicants are selected according to the 2012 total.

Source: WIPO Statistics Database, March 2013

A.3.5 List of top PCT applicants: government and research institutions

The Commissariat à l'Énergie Atomique et aux Énergies Alternatives of France accounted for the largest number of PCT publications in the government and research institutions category, with 391 published applications. It had 127 more applications published than the next highest applicants and was the only government and research institution that ranked among the overall top 50 PCT applicants in 2012.

The Republic of Korea had, with 7 applicants, the largest number of applicants in this list, followed by the US and its 4 applicants.

Table A.3.5: Top 30 PCT applicants: government and research institutions

Rank	Applicant's Name	Origin	PCT applications			Change compared to 2011
			2010	2011	2012	
1	COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES	France	308	371	391	20
2	FRAUNHOFER-GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG E.V.	Germany	297	294	264	-30
3	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS)	France	207	196	197	1
4	CHINA ACADEMY OF TELECOMMUNICATIONS TECHNOLOGY	China		119	171	52
5	INSTITUTE OF MICROELECTRONICS OF CHINESE ACADEMY OF SCIENCES	China	1	74	161	87
6	MIMOS BERHAD	Malaysia	67	108	146	38
7	INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE (INSERM)	France	83	90	116	26
7	ELECTRONICS & TELECOMMUNICATIONS RESEARCH INSTITUTE OF KOREA	Republic of Korea	174	104	116	12
9	AGENCY OF SCIENCE, TECHNOLOGY AND RESEARCH	Singapore	154	180	108	-72
10	CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (CSIC)	Spain	126	120	90	-30
11	UNITED STATES OF AMERICA, REPRESENTED BY THE SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES	United States of America	113	98	88	-10
12	NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY	Japan	91	100	84	-16
13	COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH	India	56	53	77	24
14	KOREA RESEARCH INSTITUTE OF BIOSCIENCE AND BIOTECHNOLOGY	Republic of Korea	44	45	76	31
15	NEDERLANDSE ORGANISATIE VOOR TOEGEPAST- NATUURWETENSCHAPPELIJK ONDERZOEK TNO	Netherlands	116	82	66	-16
16	MAX-PLANCK-GESELLSCHAFT ZUR FORDERUNG DER WISSENSCHAFTEN E.V.	Germany	57	49	59	10
16	BATTELLE MEMORIAL INSTITUTE	United States of America	50	54	59	5
17	KOREA INSTITUTE OF INDUSTRIAL TECHNOLOGY	Republic of Korea	17	30	49	19
18	COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION	Australia	61	48	49	1
19	MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH	United States of America	60	49	48	-1
21	RIKEN (THE INSTITUTE OF PHYSICAL AND CHEMICAL RESEARCH)	Japan	24	33	45	12
22	KOREA RESEARCH INSTITUTE OF CHEMICAL TECHNOLOGY	Republic of Korea	26	35	42	7
23	CLEVELAND CLINIC FOUNDATION	United States of America	23	18	38	20
24	NATIONAL INSTITUTE FOR MATERIALS SCIENCE	Japan	35	34	36	2
25	KOREA INSTITUTE OF MACHINERY & MATERIALS	Republic of Korea	15	36	33	-3
26	KOREA INSTITUTE OF ENERGY RESEARCH	Republic of Korea	13	23	32	9
27	SHANGHAI INSTITUTE OF MICROSYSTEM AND INFORMATION TECHNOLOGY CHINESE ACADEMY OF SCIENCES	China		17	31	14
28	DEUTSCHES ZENTRUM FUR LUFT- UND RAUMFAHRT E.V.	Germany	29	29	29	0
29	KOREA ELECTRONICS TECHNONLOGY INSTITUTE	Republic of Korea	10	19	28	9
30	VIB VZW	Belgium	12	13	27	14

Note: Government and research institutions include private non-profit organizations and hospitals. Due to confidentiality requirements, PCT data are based on publication date. Top applicants are selected according to the 2012 total.

Source: WIPO Statistics Database, March 2013

A.4

International Collaboration

Developing modern technology is an increasingly complex undertaking. Very often, it requires collaboration across countries. Such collaboration involves: (1) joint research projects carried out by institutions from different countries; and (2) companies that employ engineers from foreign countries. This section explains how international collaboration affects innovation and, more specifically, PCT filings.

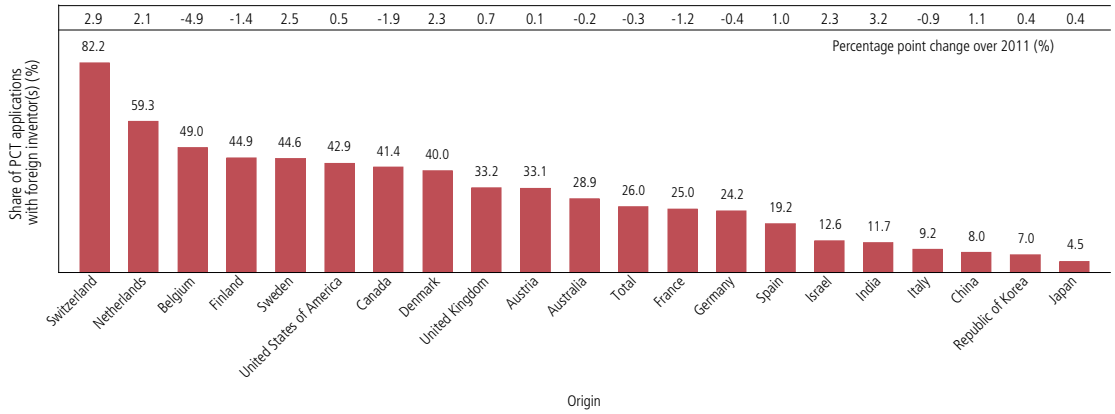
A.4.1 Share of PCT applications with foreign inventors

Figure A.4.1 illustrates the share of applications with foreign inventors for the top countries of origin. The data refer to published PCT applications and include only those applications in which the first-named applicants are corporations (excluding first-named applicants that are natural persons).

In 2012, about a quarter (26%) of published PCT applications included at least one foreign inventor. This share varied widely from one country to another. Swiss companies had the highest share (82.2%) of foreign inventors named in their applications. This share increased by 2.9 percentage points on 2011, representing the second highest increase after India (+3.2).

The Netherlands (59.3%) and Belgium (49%) also had substantive shares of published PCT applications with at least one foreign inventor. In contrast, Japan (4.5%), the Republic of Korea (7%) and China (8%) had low shares of published PCT applications with foreign inventors.

Figure A.4.1: Share of PCT applications with at least one foreign inventor for the top 20 origins, 2012



Note: Counts are based on corporate applicants only (thus excluding natural persons). Due to confidentiality requirements, PCT data are based on publication date.

Source: WIPO Statistics Database, March 2013

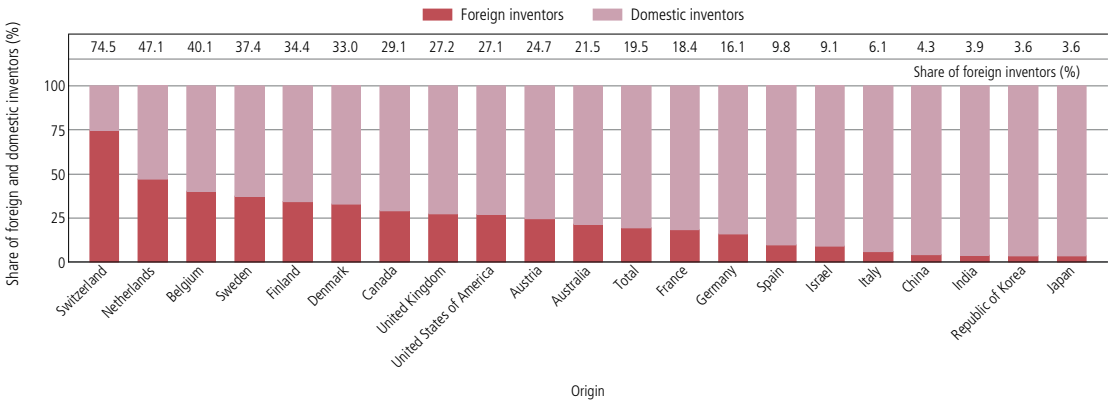
A.4.2 Share of foreign inventors named in PCT applications

Figure A.4.2 shows the distribution of inventors according to whether they are domestic or foreign. The share of domestic and foreign inventors is calculated using all inventors named in PCT applications published in 2012. The distribution by country of origin is calculated using the origins of all applicants named in PCT applications published in 2012 (not only first-named applicants) that are corporations (excluding applicants that are natural persons).

On average, 19.5% of inventors named in PCT applications published in 2012 were of foreign origin. Swiss applications had the highest share of foreign inventors, as about three-quarters (74.5%) of inventors mentioned in PCT applications filed by Swiss corporate applicants were foreigners. In contrast, fewer than 5% of inventors working for applicants domiciled in China (4.3%), India (3.9%), the Republic of Korea (3.6%) and Japan (3.6%) were of foreign origin.

Although at least one foreign inventor was named in 42.9% of PCT applications from the US (see A.4.1), they accounted for only 27.1% of all inventors named in PCT applications filed by US corporate applicants.

Figure A.4.2: Share of domestic and foreign inventors for top 20 origins, 2012



Note: Counts are based on corporate applicants only (thus excluding natural persons). Due to confidentiality requirements, PCT data are based on publication date.

Source: WIPO Statistics Database, March 2013

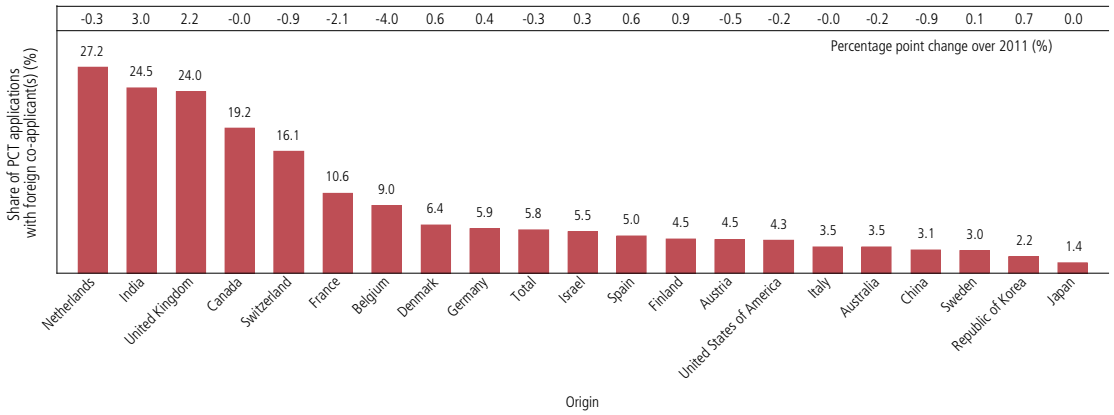
A.4.3 Share of PCT applications with foreign co-applicants

Figure A.4.3 shows the proportion of PCT applications published in 2012 that were jointly filed by applicants from different countries. The share is calculated based on all applicants named in PCT applications published in 2012 (not only first-named applicants) that are corporations (excluding applicants that are natural persons).

The overall level of international collaboration among applicants from different countries remained low in 2012, with only 5.8% of PCT applications having at least two joint corporate applicants from different countries.

About a quarter of PCT applications from the Netherlands (27.2%), India (24.5%) and the United Kingdom (24%) were filed jointly with foreign applicants. In contrast, only 1.4% of PCT applications from Japan and 2.2% from the Republic of Korea had foreign co-applicants.

Figure A.4.3: Share of PCT applications with at least one foreign co-applicant for top 20 origins, 2012



Note: Counts are based on corporate applicants only (thus excluding natural persons) and on all applicants named in PCT applications. Due to confidentiality requirements, PCT data are based on publication date.

Source: WIPO Statistics Database, March 2013

A.5

Fields of Technology of PCT Applications

PCT applications span a wide range of technologies – some emerging, some maturing and others declining. The tendency to file patent applications differs across technologies, as some technologies depend more heavily on the patent system than others. This subsection shows the distribution of PCT applications across fields of technology by year and for the top 10 countries of origin.

For reasons of confidentiality, statistics are based on publication rather than filing date. Statistics based on publication date have a delay of approximately six months compared to those based on international filing date. The breakdown of published PCT applications by field of technology is based on a concordance table that relates the International Patent Classification (IPC) symbols to 35 fields of technology.[19]

A.5.1 PCT applications by field of technology

Table A.5.1 shows the number of PCT applications by field of technology for applications published from 2008 to 2012.

In 2012, electronic machinery, with 13,293 published applications, became the field of technology in which the largest number of PCT applications were published, followed by digital communications (12,616 applications) and computer technology (12,391). This was the first year in which the top three fields belonged to the same sector, namely electrical engineering. Medical technology (11,348), which grew at a slower pace, moved to fourth position.

The distribution of applications among the different fields ranged from 0.2% (micro-structural and nano-technology, 434 applications) to 7.5% (electrical machinery, apparatus and energy, 13,293 applications) in 2012.

Almost all fields (33 out of 35) reported growth in published applications, of which 8 showed double-digit growths. The three fields with the highest growth rates were: IT methods for management (+22.8%), micro-structural and nano-technology (21.2%) and transport (+17.5%). In contrast, the two fields with declining numbers were analysis of biological materials (-3.9 %) and handling (-1.6%).

19 The concordance table is available at *www.wipo.int/ipstats/en/statistics/patents/.*

Table A.5.1: PCT applications by field of technology

	Technical Field	Year 2008	2009	2010	2011	2012	2012 Share (%)	Change compared to 2011 (%)
I	**Technical Field**							
1	Electrical machinery, apparatus, energy	8,943	8,986	9,170	11,350	13,293	7.5	17.1
2	Audio-visual technology	6,251	5,828	5,617	5,836	6,365	3.6	9.1
3	Telecommunications	6,397	5,856	4,878	4,986	4,988	2.8	0.0
4	Digital communication	8,846	9,066	10,591	11,650	12,616	7.1	8.3
5	Basic communication processes	1,463	1,392	1,277	1,203	1,296	0.7	7.7
6	Computer technology	11,725	10,240	9,542	10,483	12,391	7.0	18.2
7	IT methods for management	2,457	2,156	2,084	2,361	2,899	1.6	22.8
8	Semiconductors	5,028	5,582	5,860	6,509	6,889	3.9	5.8
II	**Instruments**							
9	Optics	4,557	4,326	4,192	4,551	5,110	2.9	12.3
10	Measurement	6,856	6,803	6,430	6,570	7,280	4.1	10.8
11	Analysis of biological materials	1,800	1,885	1,789	1,786	1,716	1.0	-3.9
12	Control	2,525	2,397	2,131	2,160	2,334	1.3	8.1
13	Medical technology	11,088	10,483	10,484	10,763	11,348	6.4	5.4
III	**Chemistry**							
14	Organic fine chemistry	6,119	5,672	5,516	5,306	5,578	3.2	5.1
15	Biotechnology	5,294	5,313	5,222	5,244	5,298	3.0	1.0
16	Pharmaceuticals	8,960	8,401	7,835	7,711	7,792	4.4	1.1
17	Macromolecular chemistry, polymers	3,138	3,093	2,806	3,108	3,282	1.9	5.6
18	Food chemistry	1,684	1,519	1,516	1,582	1,728	1.0	9.2
19	Basic materials chemistry	4,731	4,736	4,641	4,894	4,946	2.8	1.1
20	Materials, metallurgy	2,802	2,769	2,868	3,225	3,409	1.9	5.7
21	Surface technology, coating	2,670	2,454	2,426	2,666	2,909	1.6	9.1
22	Micro-structural and nano-technology	306	344	347	358	434	0.2	21.2
23	Chemical engineering	3,797	3,630	3,584	3,857	4,211	2.4	9.2
24	Environmental technology	2,237	2,221	2,166	2,474	2,623	1.5	6.0
IV	**Mechanical engineering**							
25	Handling	3,902	3,721	3,648	4,071	4,007	2.3	-1.6
26	Machine tools	3,203	2,946	2,714	3,048	3,372	1.9	10.6
27	Engines, pumps, turbines	4,137	4,389	4,308	5,053	5,459	3.1	8.0
28	Textile and paper machines	2,300	2,164	1,960	1,982	2,145	1.2	8.2
29	Other special machines	4,086	3,992	3,762	4,230	4,641	2.6	9.7
30	Thermal processes and apparatus	2,128	2,374	2,454	2,600	2,664	1.5	2.5
31	Mechanical elements	4,402	4,153	4,051	4,448	4,756	2.7	6.9
32	Transport	5,973	5,834	5,492	6,261	7,357	4.2	17.5
V	**Other fields**							
33	Furniture, games	3,636	3,277	3,100	3,203	3,319	1.9	3.6
34	Other consumer goods	3,165	3,010	3,003	3,172	3,317	1.9	4.6
35	Civil engineering	4,343	4,425	4,362	4,819	5,202	2.9	7.9

Note: Due to confidentiality requirements, PCT data are based on publication date.

Source: WIPO Statistics Database, March 2013

A.5.2 PCT applications by field of technology and country of origin

Electrical engineering was the sector in which the largest number of filings was concentrated for this selection of countries. For example, applications from China (with 31.8% of the total), the Republic of Korea (23.8%), Sweden (23.6%), Japan (20.4%) and the US (17.5%) were mainly concentrated in this sector. The share of published applications relating to digital communication was the highest for applicants from China (16.1% – or 4,802 applications) and Sweden (13.1% – or 821 applications).

For Switzerland (19.2%), the Netherlands (15.8%), the United Kingdom (14.7%) and France (14.1%), the highest number of applications were filed in the chemistry sector; whereas mechanical engineering was the leading sector for German applicants (18.7%).

Table A.5.2: PCT applications by field of technology for top 10 origins, 2012

		Origin									
	Technical Field	**CH**	**CN**	**DE**	**FR**	**GB**	**JP**	**KR**	**NL**	**SE**	**US**
I	**Electrical engineering**										
1	Electrical machinery, apparatus, energy	329	1,049	1,764	460	246	4,948	765	291	82	2,308
2	Audio-visual technology	67	594	267	166	88	2,677	578	96	78	1,264
3	Telecommunications	31	1,046	159	183	97	1,009	722	33	224	1,032
4	Digital communication	76	4,802	261	469	152	1,334	917	74	821	2,428
5	Basic communication processes	41	121	111	43	24	375	50	9	47	354
6	Computer technology	120	1,230	449	353	214	2,447	678	236	181	5,254
7	IT methods for management	33	66	84	58	55	310	340	21	28	1,509
8	Semiconductors	41	557	578	176	96	2,731	511	100	20	1,756
II	**Instruments**										
9	Optics	40	371	325	160	100	2,420	309	126	23	953
10	Measurement	246	339	963	370	248	1,619	267	221	121	1,920
11	Analysis of biological materials	55	40	149	109	82	209	64	49	29	658
12	Control	76	146	282	105	71	454	99	38	34	619
13	Medical technology	286	389	1,007	278	335	1,705	403	406	179	4,812
III	**Chemistry**										
14	Organic fine chemistry	267	296	682	445	208	836	209	133	34	1,585
15	Biotechnology	180	264	369	283	188	596	252	131	59	2,019
16	Pharmaceuticals	343	409	485	314	256	656	422	117	91	3,082
17	Macromolecular chemistry, polymers	69	94	447	119	38	1,063	162	120	16	800
18	Food chemistry	174	75	84	58	56	314	90	120	14	389
19	Basic materials chemistry	128	197	605	175	151	1,053	181	182	34	1,618
20	Materials, metallurgy	55	209	380	158	72	1,162	199	47	36	573
21	Surface technology, coating	43	129	321	108	66	998	144	39	18	720
22	Micro-structural and nano-technology	12	15	31	29	9	60	42	7	4	154
23	Chemical engineering	107	230	587	201	145	679	198	114	69	1,167
24	Environmental technology	66	142	287	120	73	589	131	75	55	636
IV	**Mechanical engineering**										
25	Handling	232	179	499	174	133	646	143	99	65	978
26	Machine tools	65	216	738	103	54	829	138	18	76	627
27	Engines, pumps, turbines	68	262	1,283	312	158	1,319	198	49	73	924
28	Textile and paper machines	75	106	298	61	59	491	117	45	28	533
29	Other special machines	95	174	610	278	130	950	234	135	78	1,033
30	Thermal processes and apparatus	63	207	379	124	62	627	167	43	41	449
31	Mechanical elements	58	240	1,222	225	131	1,094	138	54	176	825
32	Transport	102	268	1,714	666	224	2,032	283	75	208	903
V	**Other fields**										
33	Furniture, games	100	305	260	135	184	326	251	93	69	875
34	Other consumer goods	78	193	477	157	149	479	326	56	19	733
35	Civil engineering	73	330	481	219	236	395	260	101	116	1,586

Note: CH (Switzerland), CN (China), DE (Germany), FR (France), GB (United Kingdom), JP (Japan), KR (Republic of Korea), NL (Netherlands), SE (Sweden) and US (United States of America). Due to confidentiality requirements, PCT data are based on publication date.

Source: WIPO Statistics Database, March 2013

Part II - PCT National Phase Entries

The PCT process starts with the international phase and concludes with the national phase (for further details, see Introduction to the Patent Cooperation Treaty). The national or regional patent office at which an applicant enters the PCT national phase initiates the granting procedure according to prevailing national law. PCT national phase entry (NPE) data provide information on international patenting strategies. The NPE data reported here are based on data supplied to WIPO by national and regional patent offices several months after the end of each year. Therefore, the latest available data refer to 2011. Not all offices supply NPE data to WIPO (for further details, see Data Description).

This subsection briefly describes the global trend, as well as NPEs by origin and office.

A.6

Global Trend

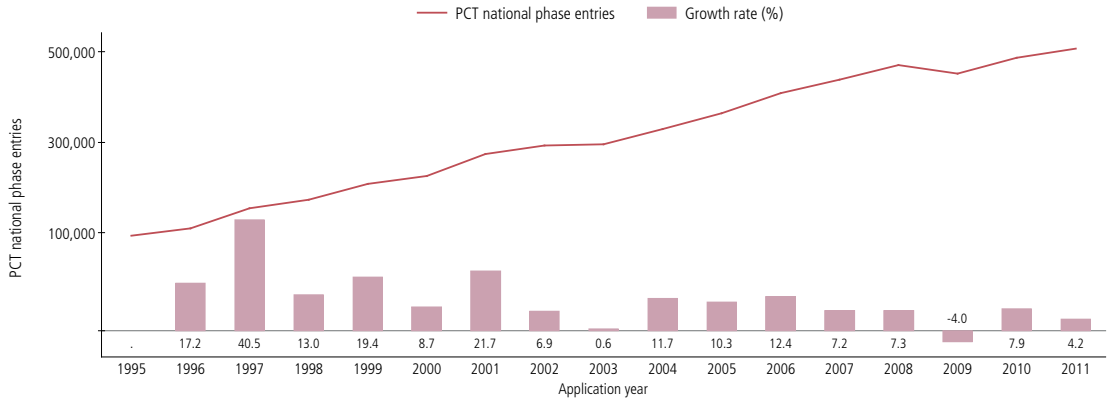
A.6.1 Trend in PCT national phase entries

Figure A.6.1 depicts the number of NPEs from 1995 to 2011. Missing data for offices that do not provide statistics have been estimated by WIPO on an aggregate basis in order to present the following figure (see Data Description for further details).

The number of PCT NPEs totaled 507,400 in 2011, corresponding to a 4.2% increase on 2010. About 85% of these NPEs were initiated by non-resident applicants, representing 431,800 NPEs. The remaining 75,600 NPEs were initiated by resident applicants at their home office.

Even though the 2011 growth rate was slightly lower than average annual growth between 2005 and 2010 (+6%), this second year of consecutive growth since the decline in 2009 suggests that NPEs have returned to their long-term trend. This long-term trend shows year-on-year growth in NPEs for all years between 1995 and 2011, except 2009. This growth partly reflects the increasing trend of protecting inventions abroad, as well as the larger PCT membership which has made the PCT system more attractive to its users.

Figure A.6.1: Trend in PCT national phase entries



Note: WIPO estimates

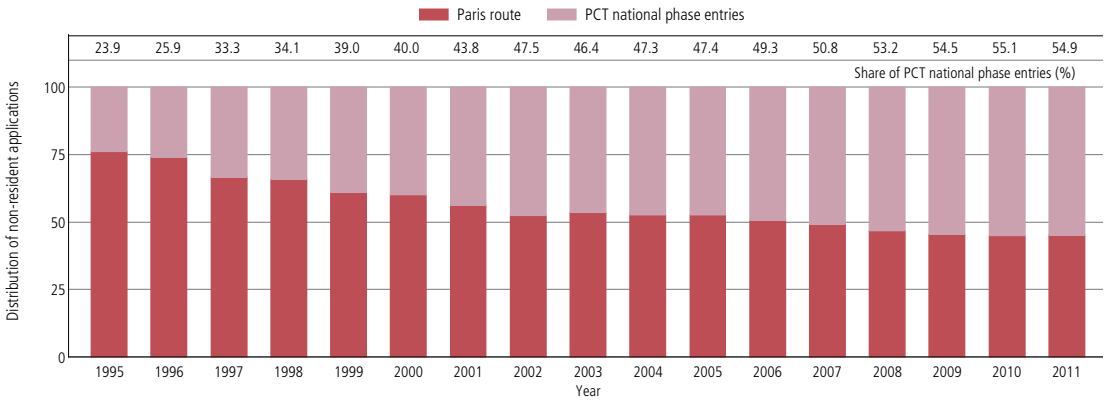
Source: WIPO Statistics Database, March 2013

A.6.2 Share of PCT national phase entries in non-resident filings

To file an application abroad (for patent protection in a foreign country), applicants can decide to use either the "Paris route" (direct applications) or "PCT route" (NPEs). Figure A.6.2 provides information on the use of the two routes by applicants filing abroad.

In 1995, over 75% of the applications filed by non-residents were filed directly at offices. Since then, the share of non-resident PCT NPEs has increased steadily. By 2007, over 50% of non-resident applications were filed via the PCT route. In 2011, more than half of applications (54.9%) were filed using the PCT system, whose share has remained almost stable over the past three years.

Figure A.6.2: Share of non-resident applications by filing route



Note: WIPO estimates

Source: WIPO Statistics Database, March 2013

A.7

National Phase Entries by Origin

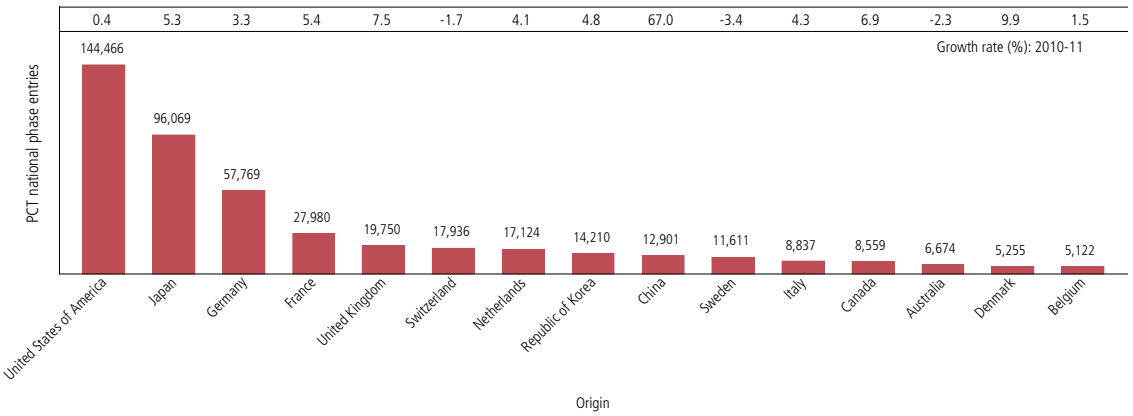
This subsection analyzes NPEs according to applicant's country and region of origin. The origin is the residence of the first-named applicant. The data presented also provide details by income group and compare the use of the PCT system to that of the Paris route. Data by origin may be incomplete.[20] A statistical table listing all countries is provided in the annex.

A.7.1 PCT national phase entries by country of origin

Applicants from the US accounted for 144,466 PCT NPEs worldwide in 2011, representing a slight increase of 0.4% on 2010. The US remained far ahead of the second and third top origins, which were Japan (96,069 NPEs) and Germany (57,769 NPEs).

Of the origins represented in Figure A.7.1, China is the only one reporting double-digit growth in NPEs in 2011 (+67%). This moves it from 12th place in 2010 to 9th place in 2011 in the list of top origins. Of the top 15 origins, only three reported declines in NPEs, namely Sweden (-3.4%), Australia (-2.3%) and Switzerland (-1.7%).

Figure A.7.1: PCT national phase entries for the top 15 origins, 2011



Note: WIPO estimates

Source: WIPO Statistics Database, March 2013

20 An estimated 14,100 PCT NPEs were initiated in 2011 for which we have no indication of their origin or have an invalid country, e.g. the EPO.

A.7.2 PCT national phase entries by middle-income country of origin

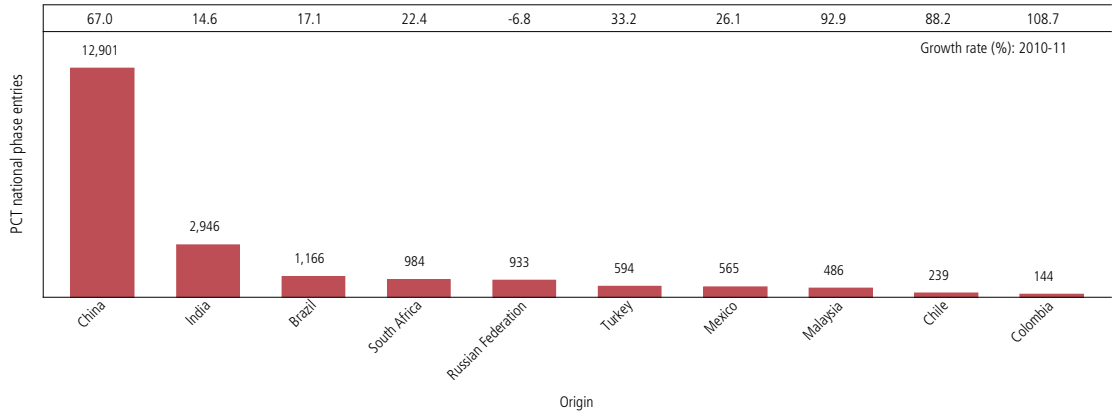
Figure A.7.2.1 shows PCT NPEs for middle-income countries of origin.

With 12,901 NPEs in 2011, China had the largest number of filings among this selection of countries, followed by India and Brazil with 2,946 and 1,166 NPEs, respectively.

All countries reported in figure A.7.2.1 experienced double-digit growth - except the Russian Federation, for which NPEs declined by 6.8% - including Colombia (+108.7%), Malaysia (+92.9%), Chile (+88.2%) and China (+67%). Despite these high growth rates, the number of NPEs remained relatively low for a majority of origins.

Table A.7.2.2 provides PCT NPEs for the top five middle-income origins in each geographical region.

Figure A.7.2.1: PCT national phase entries for the top 10 middle-income origins, 2011



Note: WIPO estimates

Source: WIPO Statistics Database, March 2013

Table A.7.2.2: PCT national phase entries for the top five middle-income origins by region

Region	Middle-income origin	Year of PCT national phase entry					Middle-income Regional Share (%) in 2011	Changed compared to 2010 (vol.)
		2008	2009	2010	2011	2012		
Africa	South Africa	817	914	853	804	984	87.9	180
	Egypt	62	21	16	12	42	3.8	30
	Seychelles	39	14	19	28	41	3.7	13
	Morocco	24	10	11	23	16	1.4	-7
	Mauritius	19	31	36	8	11	1.0	3
	Others	16	23	34	33	26	2.3	-7
	Total	**977**	**1,013**	**969**	**908**	**1,120**	**100.0**	**212**
Asia	China	3,784	4,432	5,144	7,723	12,901	75.2	5,178
	India	1,922	2,290	1,891	2,570	2,946	17.2	376
	Turkey	297	376	353	446	594	3.5	148
	Malaysia	94	186	195	252	486	2.8	234
	Thailand	23	29	30	51	72	0.4	21
	Others	91	115	127	143	165	1.0	22
	Total	**6,211**	**7,428**	**7,740**	**11,185**	**17,164**	**100.0**	**5,979**
Europe	Russian Federation	733	925	863	1,001	933	77.8	-68
	Ukraine	59	57	53	66	86	7.2	20
	Latvia	19	41	86	113	55	4.6	-58
	Romania	54	51	22	21	42	3.5	21
	Bulgaria	50	57	25	37	36	3.0	-1
	Others	75	51	46	94	47	3.9	-47
	Total	**990**	**1,182**	**1,095**	**1,332**	**1,199**	**100.0**	**-133**
Latin America & the Caribbean	Brazil	669	721	743	996	1,166	47.6	170
	Mexico	319	334	320	448	565	23.1	117
	Chile	44	58	50	127	239	9.8	112
	Argentina	54	75	91	74	104	4.2	30
	Cuba	112	285	104	67	90	3.7	23
	Others	154	182	219	222	285	11.6	63
	Total	**1,352**	**1,655**	**1,527**	**1,934**	**2,449**	**100.0**	**515**
Oceania	Samoa	2		1	17	5	83.3	-12
	Vanuatu	1	4		3	1	16.7	-2
	Marshall Islands	1	2	2				
	Palau				2			-2
	Fiji			1				
	Total	**4**	**6**	**4**	**22**	**6**	**100.0**	**-16**
Total		**9,534**	**11,284**	**11,335**	**15,381**	**21,938**		**6,557**

Source: WIPO Statistics Database, March 2013

In 2011, applicants from middle-income countries initiated 21,938 PCT NPEs worldwide, representing 4.3% of all NPEs initiated worldwide and an increase of 42.6% on 2010. This sharp increase was mainly due to the growth in filings from China (67%).

In all regions, except LAC, one middle-income country filed the vast majority of NPEs. For example South Africa filed 87.9% (or 984 NPEs) of the NPEs initiated by applicants residing in Africa, and the Russian Federation accounted for 77.8% (933 NPEs) of those filed by applicants from European middle-income countries. Brazil and Mexico each filed significant shares of LAC filings with 47.6% (1,166 NPEs) and 23.1% (565 NPEs), respectively.

A.7.3 PCT national phase entries per PCT application by country of origin

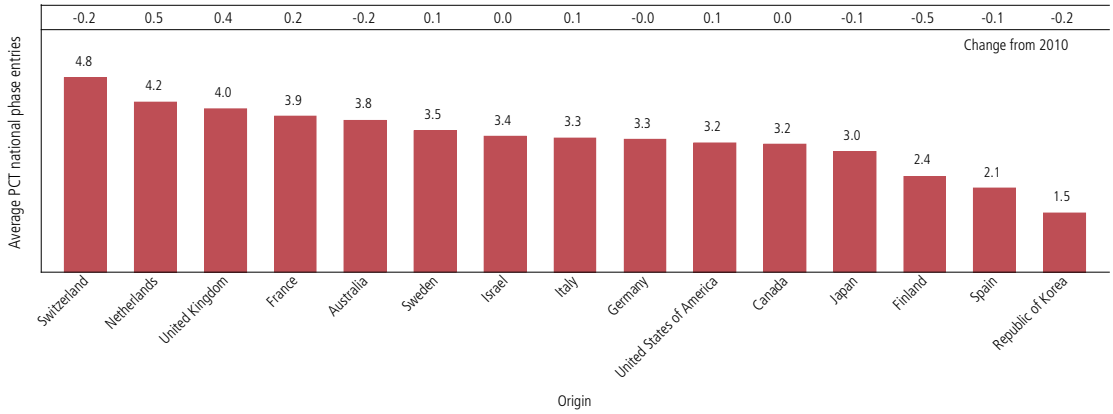
Figures A.7.3.1 and A.7.3.2 show the average number of NPEs per PCT application for the top 15 high-income and middle-income origins. To derive the average, NPEs are compared with PCT applications filed 12 months earlier (i.e., 2011 NPE data are compared with 2010 PCT filings, both on an aggregate level), as applicants usually enter the PCT national phase within 18 months of the international filing date. Not all PCT applications enter the national phase, so the numbers presented are downward biased.

The average number of NPEs per PCT application was 3.1 in 2011. For high-income origins, each PCT application resulted in an average of 3.2 NPEs, which is slightly higher than the overall average. However, for middle-income origins the average was 1.3, significantly lower than the overall average. The average number of NPEs per PCT application has increased over time for both high- and middle-income origins.

Applicants from Switzerland had the highest number of NPEs per PCT application (with 4.8), followed by the Netherlands (4.2). Eleven of the top 15 high-income origins had comparatively higher averages than the overall average of 3.1, and nine were higher than the average for high-income countries (3.2).

The top 15 middle-income origins had lower numbers of NPEs per PCT application (1.3) than their high-income counterparts. Of the middle-income origins, South Africa had the highest number of NPEs per PCT application (3.3), followed by Colombia (3.1) and Mexico (3). Although China had a significantly higher number of NPEs than South Africa and Colombia, it had a much lower average number of NPEs per PCT application, with an average of one NPE per PCT application.

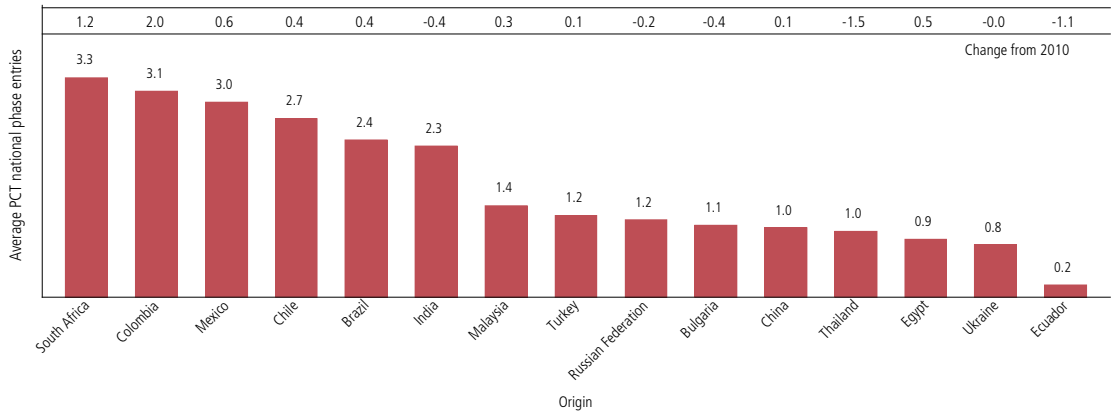
Figure A.7.3.1: Average number of national phase entries per PCT application for the top 15 high-income origins, 2011



Note: The average is defined as the number of PCT national phase entries initiated in 2011 divided by the number of PCT applications filed in 2010.

Source: WIPO Statistics Database, March 2013

Figure A.7.3.2: Average number of national phase entries per PCT application for top 15 middle-income origins, 2011



Note: The average is defined as the number of PCT national phase entries initiated in 2011 divided by the number of PCT applications filed in 2010.

Source: WIPO Statistics Database, March 2013

A.7.4 Share of PCT national phase entries in total filings abroad by country of origin

Figures A.7.4.1 and A.7.4.2 present data on the use of the PCT system to seek patent protection abroad.[21] The top 15 origins are selected based on the total number of filings abroad.

In 2011, applicants from high-income countries (with 56% of filings abroad being NPEs) relied more on the PCT system for filings abroad than did applicants from middle-income countries (47%).

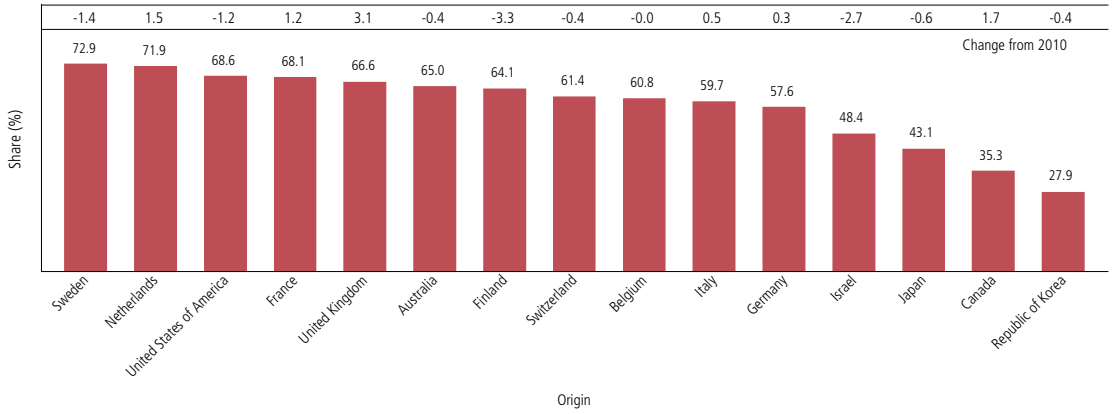
The share of PCT NPEs in total filings abroad for high-income origins ranged from 72.9% for Sweden to 27.9% for the Republic of Korea. Applicants from Sweden (72.9%), the Netherlands (71.9%), the US (68.6%) and France (68.1%) filed more than two-thirds of their applications abroad using the PCT system. By contrast, applicants from the Republic of Korea (27.9%), Canada (35.3%), Japan (43.1%) and Israel (48.4%) relied mainly on the direct route to file abroad. These shares remained relatively unchanged compared to 2010, varying from +3.1 percentage points for the United Kingdom to -3.3 percentage points for Finland.

The use of the PCT system in 2011 was also quite diverse across middle-income origins, ranging from 74.4% for South Africa to 3.7% for Belarus. The share of NPEs in total filings abroad increased significantly compared to 2010 for applicants residing in Malaysia (+22.1 percentage points), Chile (+10.9) and Colombia (+10.9). Interestingly, applicants from Argentina filed about a third of their applications abroad using the PCT system despite the fact that it is not a PCT member.[22]

21 In this subsection, PCT NPEs include only entries at patent offices of foreign countries, i.e., they exclude NPEs in an applicant's country of residence. However, PCT NPEs at the EPO by applicants from European Patent Convention (EPC) member countries are included in the calculation of NPEs.

22 Under certain conditions, the first-named applicant may reside in a country that is not a member of the PCT.

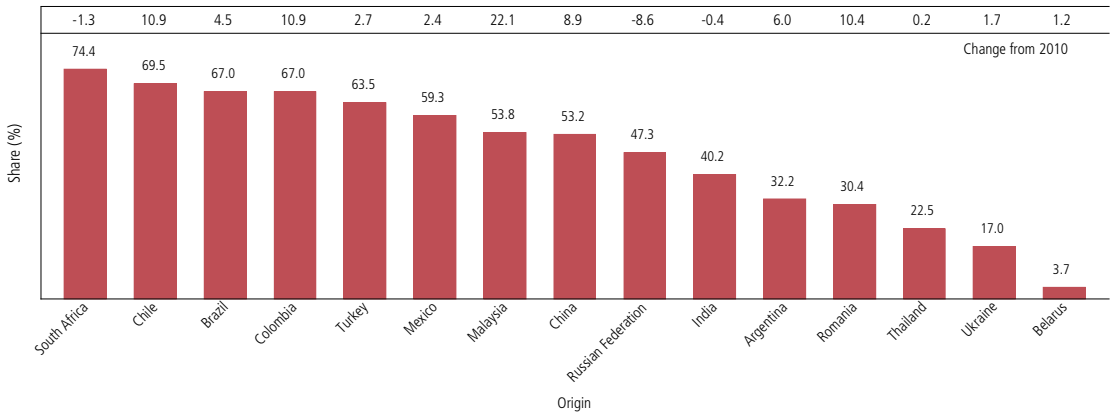
Figure A.7.4.1: Share of PCT national phase entries in total filings abroad for top 15 high-income origins, 2011



Note: The share is defined as the number of PCT national phase entries initiated abroad divided by the total number of patent applications filed abroad. Both of these numbers are WIPO estimates.

Source: WIPO Statistics Database, March 2013

Figure A.7.4.2: Share of PCT national phase entries in total filings abroad for top 15 middle-income origins, 2011



Note: The share is defined as the number of PCT national phase entries initiated abroad divided by the total number of patent applications filed abroad. Both of these numbers are WIPO estimates.

Source: WIPO Statistics Database, March 2013

A.8

National Phase Entries by Office

This subsection analyzes NPEs according to the patent office at which an applicant seeks to obtain a patent. In particular, it provides information on the destinations of NPEs, NPEs by office and origin, and the NPE share in total non-resident applications. A statistical table listing all offices is provided in the annex. Data for some offices are nonexistent.[23]

A.8.1 PCT national phase entries by office

Figure A.8.1 depicts the number of NPEs for the top 20 offices. Among other things, it reflects the commercial attractiveness of the country or region represented by that patent office.

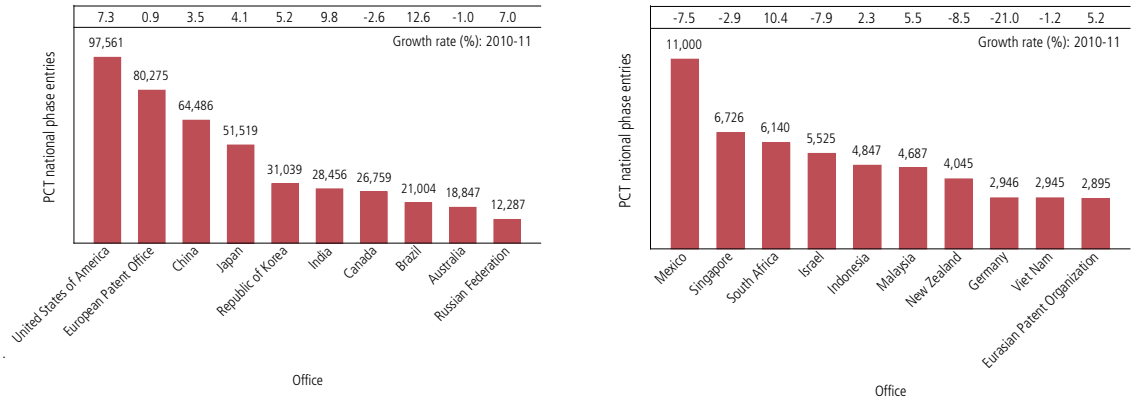
The top 20 offices accounted for 95% of total NPEs in 2011, indicating that most applicants tend to focus on large markets.

The USPTO remained the most preferred office by destination in 2011, with 97,561 NPEs. With 7.3% growth on 2010, for the fifth consecutive year the USPTO experienced the highest growth rate among the top five offices.

Most offices saw growth in NPEs compared to 2010, with several offices from middle-income countries experiencing substantial growth, such as those of Brazil (12.6%), South Africa (10.4%) and India (9.8%).

In 2011, the greatest increase in NPEs compared to 2010 occurred at the USPTO (+6,630 NPEs), followed by the offices of India (+2,533), Brazil (+2,350) and SIPO (+2,169).

Figure A.8.1: PCT national phase entries for top 20 offices, 2011



Source: WIPO Statistics Database, March 2013

23 For some offices, such as the Institut National de la Propriété Industrielle (INPI) of France, the "national route" via the PCT system is closed (see the PCT Contracting States table in the annex). In such cases, PCT applicants must enter the national phase at a regional patent office to obtain patent protection in the countries concerned (e.g., the EPO in the case of France). For these offices, relevant NPEs are included in the numbers for regional offices.

A.8.2 PCT national phase entries by office and country of origin

Table A.8.2 shows the breakdown of NPE data for the top 20 offices by the top 10 countries of origin in order to capture the "flow of patents" between countries via the PCT system.

US applicants accounted for the largest share of non-resident NPEs received by all reported offices, except for the German office which received the largest number of its NPEs from Japan.

The share of resident NPEs was substantial at several offices. This was particularly so for Japanese applicants which accounted for the largest share of NPEs at the JPO, with 15,897 filings representing 31% of total JPO NPEs in 2011. The German office, the JPO and the USPTO are the third-most preferred offices of destination for their respective resident applicants. SIPO is the second-most preferred office of destination for Chinese applicants.

A PCT applicant seeking patent protection in a European Patent Convention (EPC) member state (see list of PCT Contracting States in the annex) can choose to enter the national phase at the national office (provided the "national route" is not closed) or at the EPO. As a result, the number of NPEs at some European national patent offices is lower than would otherwise be expected in view of the size of that particular country's economy.

Table A.8.2: National phase entries for top 20 offices and top 10 origins, 2011

Office	Origin												
	CH	CN	DE	FR	GB	JP	KR	NL	SE	US	Others	Unknown	Total
United States of America	1,899	3,455	12,766	6,017	5,303	25,938	4,304	2,688	2,470	16,120	16,601	0	97,561
European Patent Office	2,622	2,008	11,621	5,189	3,146	12,052	2,082	2,927	2,489	23,903	12,231	5	80,275
China	1,786	2,289	7,483	3,058	1,694	16,591	2,850	2,307	1,434	17,324	7,226	444	64,486
Japan	1,524	954	4,982	2,761	1,336	15,897	1,972	1,883	1,076	14,627	4,198	309	51,519
Republic of Korea	931	585	3,055	1,512	707	8,992	363	946	492	10,526	2,930	0	31,039
India	1,359	915	3,372	1,429	1,084	3,727	621	1,472	828	9,120	4,419	110	28,456
Canada	1,233	307	2,284	1,528	1,192	1,565	313	630	458	12,129	5,012	108	26,759
Brazil	1,148	516	2,431	1,582	751	2,083	251	1,087	475	7,177	3,344	159	21,004
Australia	920	342	1,432	695	1,048	1,255	290	545	399	7,950	3,898	73	18,847
Russian Federation	696	369	1,960	906	369	1,471	266	937	329	3,040	1,944	0	12,287
Mexico	743	184	1,106	496	368	649	162	409	186	4,883	1,774	40	11,000
Singapore	444	147	515	327	279	865	71	117	114	2,651	1,155	41	6,726
South Africa	419	120	723	357	506	291	37	155	154	1,905	1,421	52	6,140
Israel	12	61	22	162	211	214	32	48	51	2,345	762	1,605	5,525
Malaysia	288	109	462	281	263	766	151	156	99	1,375	737	0	4,687
New Zealand	212	40	328	165	274	186	31	101	112	1,550	1,019	27	4,045
Germany	40	57	690	27	42	1,043	73	11	21	699	221	22	2,946
Viet Nam	149	130	272	143	63	700	115	117	31	735	490	0	2,945
Eurasian Patent Organization	171	41	378	205	178	159	11	179	56	652	855	10	2,895
Ukraine	220	32	458	165	110	105	28	70	36	540	550	7	2,321

Note: This table shows the top 20 offices for which NPE data by origin are available. CH (Switzerland), CN (China), DE (Germany), FR (France), GB (United Kingdom), JP (Japan), KR (Republic of Korea), NL (Netherlands), SE (Sweden), US (United States of America).

Source: WIPO Statistics Database, March 2013

A.8.3 PCT national phase entries by office and middle-income country of origin

Table A.8.3 shows NPE data for the top 20 offices broken down by the top 10 middle-income countries of origin. The data shown in Table A.8.3 include only NPEs from middle-income countries of origin.

Chinese applicants accounted for the majority of middle-income NPEs at 11 of the 20 reported offices. For example, Chinese applications accounted for 70% and 63% of all middle-income NPEs at the JPO (954 NPEs) and the USPTO (3,455 NPEs), respectively. However, Russian applicants initiated the largest share of NPEs at the Eurasian Patent Organization as well as at the office of Ukraine.

Table A.8.3: National phase entries for top 20 offices and top 10 middle-income origins, 2011

Office	Origin											
	BR	CL	CN	CO	IN	MX	MY	RU	TR	ZA	Others	Total
United States of America	265	45	3,455	22	801	81	91	241	92	193	223	5,509
European Patent Office	175	27	2,008	13	373	63	71	133	200	105	116	3,284
China	118	16	2,289	6	202	42	69	108	59	66	76	3,051
India	67	9	915	5	216	27	61	48	19	68	96	1,531
Japan	62	10	954	2	154	22	21	37	26	42	37	1,367
Brazil	68	17	516	15	132	42	18	25	18	40	48	939
Republic of Korea	45	5	585	3	104	25	12	27	11	23	18	858
Canada	61	18	307	4	136	39	7	43	14	46	48	723
Australia	39	14	342	3	149	13	22	13	8	80	33	716
Russian Federation	31	7	369	2	52	16	3	37	12	34	30	593
South Africa	34	11	120	3	103	7	5	6	6	180	18	493
Mexico	55	12	184	12	76	73	0	12	6	15	27	472
Singapore	12	2	147	1	51	7	16	8	4	8	12	268
Malaysia	7	0	109	1	58	10	30	5	3	10	19	252
Eurasian Patent Organization	3	1	41	2	26	3	3	81	19	3	29	211
Viet Nam	6	0	130	2	30	4	17	5	3	1	7	205
Ukraine	5	0	32	2	26	1	0	48	10	11	12	147
New Zealand	6	5	40	2	54	4	6	4	4	11	2	138
Israel	4	1	61	0	33	3	1	12	1	1	7	124
Thailand	5	0	49	0	28	0	8	1	0	1	28	120

Note: This table shows the top 20 offices for which NPE data by origin are available. BR (Brazil), CL (Chile), CN (China), CO (Colombia), IN (India), MX (Mexico), MY (Malaysia), RU (Russian Federation), TR (Turkey), ZA (South Africa).

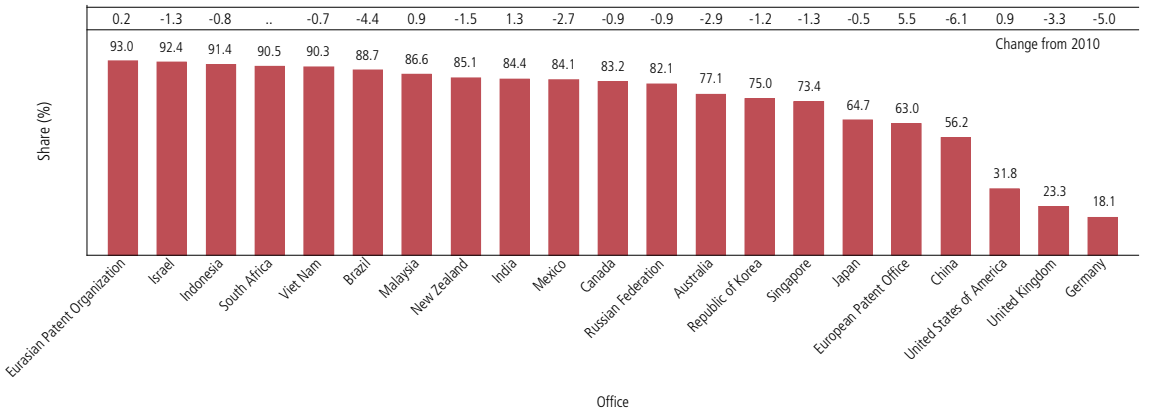
Source: WIPO Statistics Database, March 2013

A.8.4 Share of PCT national phase entries in non-resident filings by office

Figure A.8.4 depicts the share of NPEs in total non-resident filings for selected offices. It shows the use of the PCT system, rather than the Paris route, by non-resident applicants. Unlike Figure A.7.4, data presented here are from the perspective of offices selected by applicants for NPE rather than the applicant's country of origin.

In 2011, the use of the PCT route for non-resident filings varied widely from one office to another, with shares ranging from 93% for the Eurasian Patent Organization to 18.1% for Germany. The use of the PCT system is, however, quite intense at offices of middle-income countries. Eight of the top 11 offices – all of which have shares of NPEs higher than 80% - are from the middle-income category. By contrast, several offices from the high-income category showed a relatively low share of NPEs, such as Germany (18.1%), the United Kingdom (23.3%) and the USPTO (31.8%).

Figure A.8.4: Share of PCT national phase entries in total non-resident filings by office, 2011



Note: The share is defined as non-resident PCT national phase entries initiated divided by non-resident patent applications filed. It includes the 20 offices that received the most non-resident filings in 2011, that are members of the PCT system and that provided a breakdown by filing route to WIPO.

Source: WIPO Statistics Database, March 2013

SECTION B
PERFORMANCE OF THE PCT SYSTEM

B.1

INTERNATIONAL BUREAU

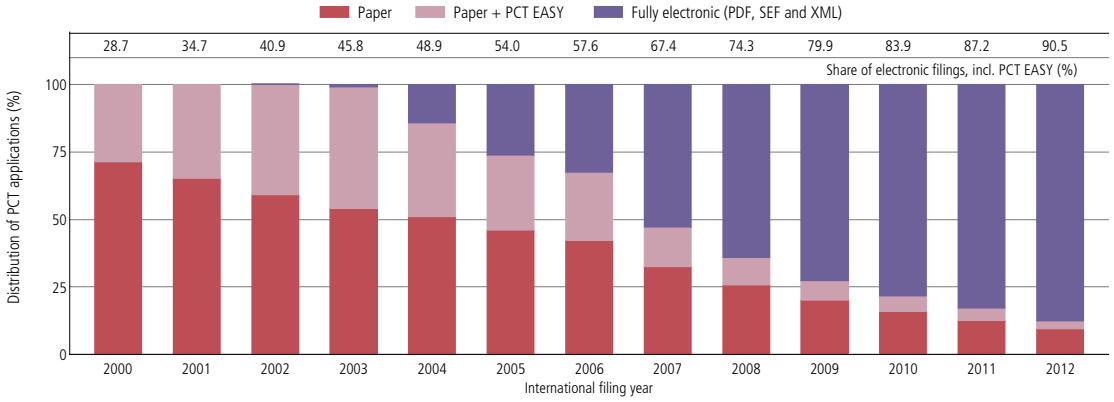
In addition to its role as a receiving office (RO), the International Bureau (IB) is responsible for carrying out a number of functions related to the international phase of the PCT system. These include formalities examination, translation of abstracts, titles and patentability reports, and publication of PCT applications.

B.1.1 PCT applications by medium of filing

Figure B.1.1 depicts the breakdown of PCT applications filed at all ROs by medium of filing. Every PCT application is filed by one of the three available methods: (i) paper; (ii) paper along with a digital storage medium (the application being prepared electronically using WIPO-provided software known as PCT-EASY); and (iii) fully electronic media in different formats, such as PDF or XML. Electronic filing offers benefits to both applicants and offices and is thus encouraged by the PCT system through fee reductions.

Driven by the fully electronic filings, the share of electronic flings (including PCT-EASY filings) continued to increase in 2012, representing more than 9 applications out of 10 (90.5%). Since the introduction of fully electronic filing, PCT-EASY filings have dropped considerably – from 44.8% in 2003 to only 3.1% in 2012. Paper filings accounted for 71.3% of filings in 2000 but only 9.5% in 2012.

Figure B.1.1: PCT applications by medium of filing



Note: 2012 data are WIPO estimates.

Source: WIPO Statistics Database, March 2013

B.1.2 Electronic filing and processing

The main developments in 2012 affecting the processing of PCT applications by the IB were the following.

ePCT System

In 2012, significant progress was made with respect to the development of the ePCT system. Applicant functionality was extended beyond simple document viewing and upload to enable applicants to interact online with their PCT applications and participate to a certain extent in their processing. The introduction of ePCT "actions" enables applicants to enter bibliographic data into the IB's database that can be reused by the IB for processing. For example, the data provided as part of the action to request changes under rule 92bis are used directly by the IB without the need to transcribe them, thus eliminating the risk of introducing transcription errors. Moreover, the applicable time limit for each action is monitored and validated by the system. For more information regarding the ePCT system, please refer to subsection C.2.

Automation of XML applications

In 2012, systems and procedures were introduced that exploit more effectively the XML format in which certain applications and related documents are filed. This allowed for the automation of a significant part of the processing of these applications, namely the formalities examination relating to Form PCT/IB/301 (acknowledgement of receipt of the application by the IB). This represents approximately 30% of all the work required to process an application.

In 2012, these new procedures were mostly applied to Japanese applications, because they contain the highest proportion of XML filings. As a consequence, the formalities examination and the related issuance of Form PCT/IB/301 for about 90% of the Japanese XML applications no longer require any human intervention (which is now only needed in the remaining 10% of complex cases).

These developments resulted in a significant improvement in the timeliness in issuing Form PCT/IB/301 for Japanese applications during the last months of 2012. This is a particularly welcome development, because performance in respect of this indicator has traditionally been less than optimal for Japanese applications, in view of the relatively low number of employees with the required language skills.

In addition, it should be noted that, at least until the end of 2012, XML processing presented new complications in other areas such as the processing of amended claims; however, it is hoped that these will gradually disappear as the quality of the XML data and processes improves.

In the years to come, it is expected that the above approach will be applied to an ever-increasing number of applications and documents. However, the extent to which this is possible will ultimately depend on the format in which these data are received by the IB. In 2012, only 28% of all applications were filed in XML format.

B.1.3 Languages of filing

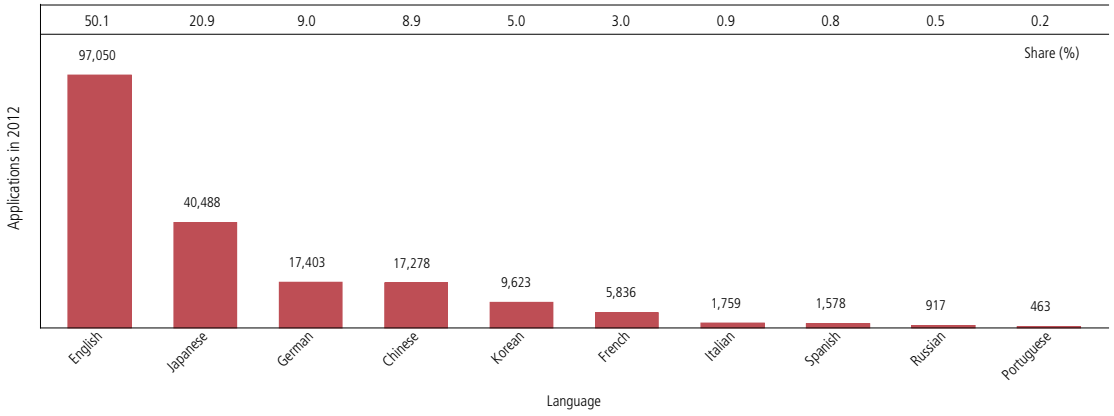
Figure B.1.3 presents the number of PCT applications filed for the top 10 languages of filing.[24]

English remained by far the most frequently used language of filing in PCT applications filed during 2012, accounting for half of them (50.1%).

The languages of filing with the largest increases in use in 2012 compared to the previous year were Japanese (+4,656 applications), English (+4,039), Chinese (+1,972) and Korean (+1,224).

In 2012, PCT applications were filed in 25 languages. The top 10 languages of filing represented 99.3% of total filings. The remaining languages were mainly European languages such as Finnish, Dutch and Swedish.

Figure B.1.3: PCT applications for top 10 languages of filing, 2012



Note: 2012 data are WIPO estimates.

Source: WIPO Statistics Database, March 2013

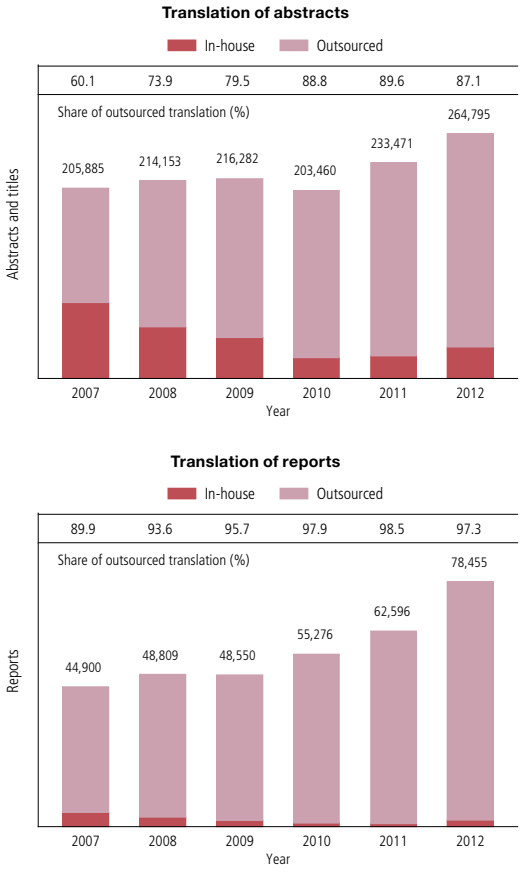
24 A PCT application may be filed in any language accepted by the relevant RO, but must be published in one of the 10 official publication languages. Among the top 10 languages of filing presented in B.1.3, all are languages of publication except Italian.

B.1.4 Translation

The translations produced by the IB are intended to enhance the patent system's disclosure function by making the technological information in PCT applications accessible in languages other than those in which the original documents were filed. In order to meet this objective, the IB ensures that all abstracts and titles of PCT applications are made available in English and French, and all preliminary search and examination reports in English.

Figure B.1.4 presents the distribution of in-house and outsourced translations since 2007 for both titles and abstracts (henceforth, abstracts) and preliminary search and examination reports (henceforth, reports).

Figure B.1.4: Distribution of translation work



Source: WIPO, March 2013

The number of documents translated in 2012 increased significantly compared to 2011, with 264,795 abstracts translated and 78,455 reports translated, representing growth of 13.4% and 25.3%, respectively. The increase was due mainly to higher numbers of translations from the Asian languages.

Despite this growing workload, the share of outsourced abstracts and reports slightly decreased in 2012. This is the first time such a decrease has been witnessed since outsourcing of translations started in 2006. However, external agencies and translators continued to translate the vast majority of abstracts (87.1%) and reports (97.3%) in 2012.

Other important developments in 2012 included the following.

The IB introduced a modernized environment for its internal translators that allows past translations and terminology to be better exploited, with the aim of increasing translation efficiency. For external agencies and translators, it was decided to adopt a commercially available system for workflow automation and translation distribution. Implementation of this system began in 2012 and initial roll-out is planned for the summer of 2013.

This will enable greater control over the way translations are distributed both internally and to outside collaborators and should eventually ensure that cost benefits arising from similarity or repetition between and within translations can be harvested by the IB rather than by external agencies. Extended control over how translations are further distributed by translation agencies should also ensure a more effective means of minimizing information security risks.

The agencies selected in the 2011 tendering process for Japanese and Chinese translation were also moved into full production in the course of 2012. The number of prospective agencies whose work proved successful was limited; however, their impact on costs was significant. Structural changes to the tendering process will be made

in 2013 with a view to improving agency yield. This will be a priority focus for 2013, culminating in a new tender for Korean translation to be used as a benchmark for subsequent tenders.

B.1.5 Terminology database

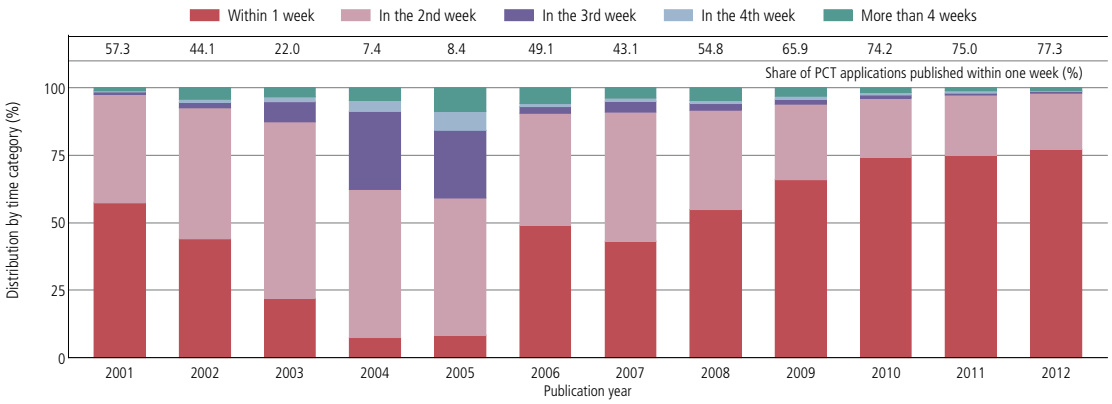
In 2012 the IB continued to develop its multilingual terminology database in order to improve the quality of internally and externally produced translations. Emphasis was placed on adding terms in certain languages that are currently underrepresented in the database, namely Arabic, Chinese, Japanese, Korean, Portuguese, Russian and Spanish. During the year, 17,553 terms were added across all 10 PCT publication languages. At the end of 2012, the database contained 65,500 terms, among which 93% were validated terms. The main objective for 2013 is to prepare to publish the database on the WIPO website.

B.1.6 Timeliness in publishing PCT applications

PCT applications and related documents are to be published "promptly" after the expiration of 18 months from the priority date, unless the applicant requests early publication or the application is withdrawn or considered withdrawn. Figure B.1.6 shows publication timeliness after the expiration of the 18-month period.

For the fifth consecutive year, timeliness in publishing PCT applications has improved. In 2012, 77.3% of publications occurred within one week after the expiration of the 18-month period, and 98% within two weeks.

Figure B.1.6: Timeliness in publishing PCT applications



Note: Timeliness is calculated as the time elapsed between the time limit of 18 months from the priority date and the actual publication date.

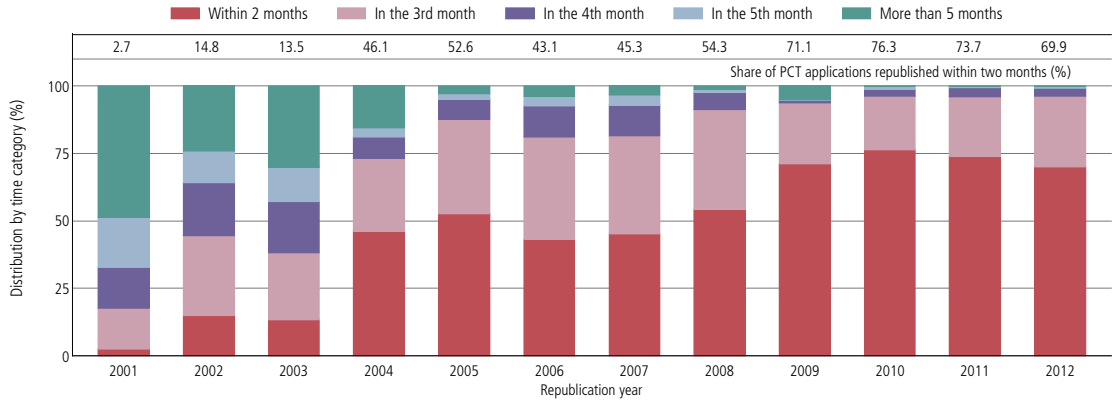
Source: WIPO Statistics Database, March 2013

B.1.7 Timeliness in republishing PCT applications

The IB is required to publish PCT applications even in the absence of the International Search Report (ISR). In such cases, the PCT application is republished along with the ISR after the report is received. Figure B.1.7 shows the timeliness of republication by the IB of PCT applications with ISRs, calculated from the date of receipt of the ISR by the IB.

Between 2001 and 2010, there was considerable improvement in the timeliness of republishing applications with ISRs. However, the share of PCT applications republished within two months decreased by 6.4 percentage points between 2010 and 2012. During 2012, 69.9% of republications occurred within two months of the IB receiving the ISR, and 96.2% within three months.

Figure B.1.7: Timeliness in republishing PCT applications with ISRs



Note: Timeliness is calculated as the time elapsed between the date of the receipt of International Search Report at the IB (IB) and the date of republication by the IB.

Source: WIPO Statistics Database, March 2013

B.1.8 Quality

Formalities examination

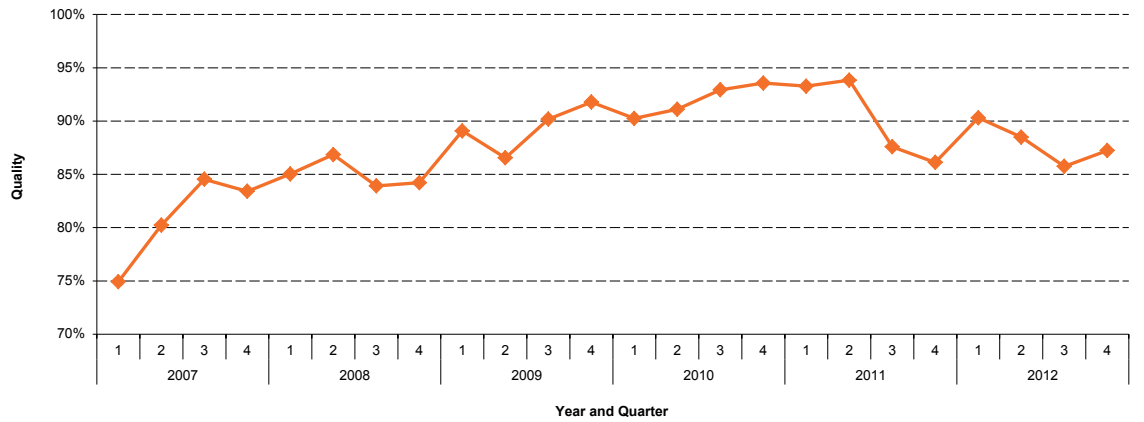
In order to measure the quality of the formalities examination performed by the IB in a simple and comprehensive manner, the IB has developed an aggregate quality index, calculated as the average of four lead quality indicators. Three of these indicators are based on the timeliness of key transactions: acknowledgement of receipt of the PCT application; publication; and republication. The fourth indicator reflects errors made during the processing of PCT applications.

The quality, as measured by the aggregate index, improved markedly from 2007 to the second quarter of 2011. Increased delays in the republication of PCT applications with the ISR were the main cause of the drop observed in the second half of 2011.

The quality improved markedly in the first quarter of 2012 but decreased again during the next two quarters. The main reason for this drop was a deterioration in the share of notifications of receipt of a PCT application sent to applicants within five weeks, which dropped from 90.8% in quarter 1 to 76.3% in quarter 3. However, since quarter 4, part of these notifications has been automatically sent to applicants shortly after the receipt of their applications (see B.1.2), thus explaining the share of 93.7% at the end of the year.

In addition, the share of applications republished within two months diminished considerably during the second half of 2012. In the second quarter of 2012, approximately 76.6% of applications were republished within two months; however, this dropped to only 57.7% in the last quarter of 2012.

Figure B.1.8.1: Formalities examination quality index



Note: The quality index is the simple average of: (i) percentage of Forms PCT/IB/301 ("Notification of receipt of a PCT Application") sent within five weeks after the IB receives a PCT application; (ii) percentage of PCT applications published within six months and three weeks after the international filing date; (iii) percentage of republications with ISRs within two months after the IB receives the ISR; (iv) percentage of corrections to bibliographic data in the published PCT application (from 2007 to 2011); and (v) PCT operation quality control error rate (from 2012 onwards).

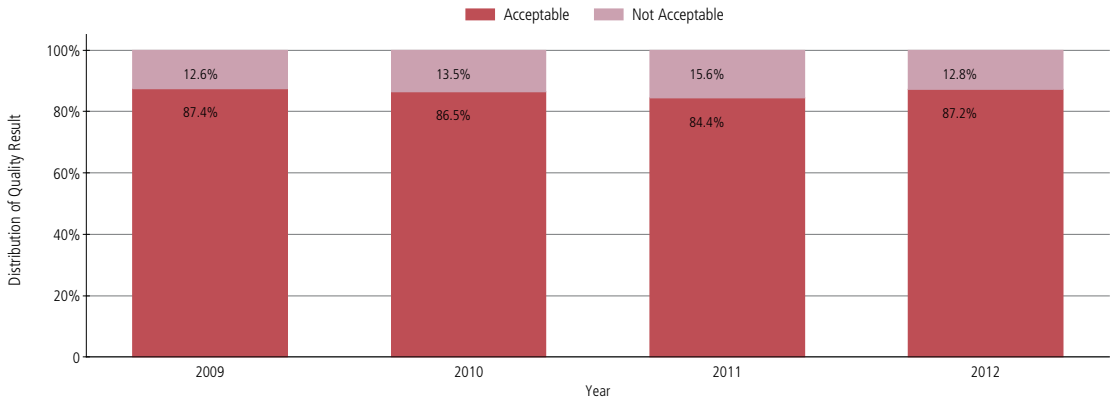
Source: WIPO Statistics Database, March 2013

Translation

The translation quality indicator shows the average quality of abstracts and reports translation done by external suppliers and in-house translators combined. It is based on the results of the regular quality control performed by the IB.

The share of acceptable translations has remained relatively stable since 2009 as it fluctuated within a margin of 3 percentage points over 4 years. In 2012, 87.2% of documents translated by the IB were considered acceptable and the remaining 12.8% were regarded as not acceptable.

Figure B.1.8.2: Translation quality indicator



Source: WIPO, March 2013

B.1.9 Efficiency in processing PCT applications

The IB's productivity in processing PCT applications can be measured by the unit cost of processing, defined as the average total cost of publishing a PCT application. Average total cost is determined by total PCT expenditure, plus a proportion of expenditure on support and management activities.[25] The unit cost thus includes the cost of all PCT activities, including translation, communication, management and others.

Costs consist of two components: direct and indirect. Direct costs reflect expenditure incurred by the IB in the administration of the PCT system and related programs. Indirect costs reflect expenditure for supporting activities (e.g., buildings and information technology, among others). Indirect costs are weighted to take into account only the share attributable to the PCT system. The cost of storing published applications is added to unit cost since the PCT system must archive them for a period of 30 years.

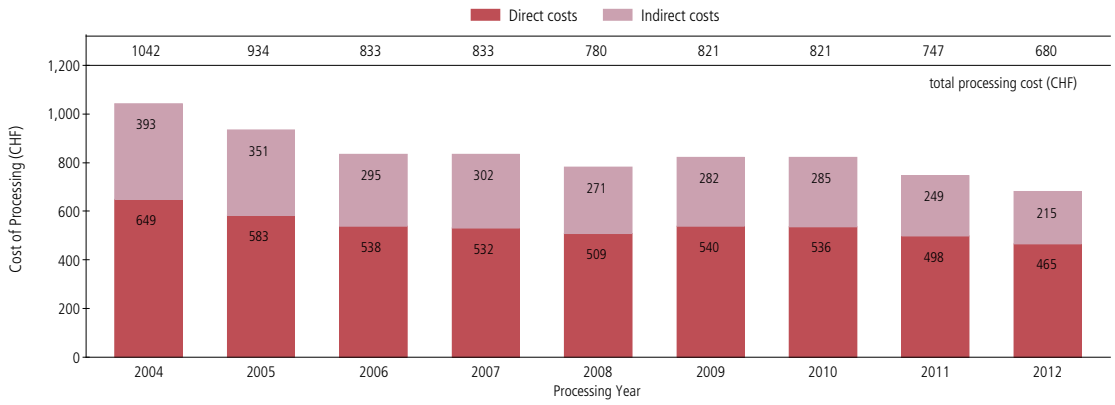
Formally, unit cost is defined as:

$$\text{Unit cost} = \frac{\text{Total cost of production}}{\text{Number of publications}} + \text{Cost of storage}$$

Figure B.1.9 depicts the evolution of the unit cost of processing from 2004 to 2012, including a breakdown of the contribution of direct and indirect costs.

The average cost of processing a published PCT application has decreased by 9% in 2012 compared to 2011, and reached 680 Swiss Francs. This decrease is partly explained by the fact that 8.9% more PCT applications were published in 2012 than in 2011, while overall costs decreased slightly (in particular indirect costs).

Figure B.1.9: Unit cost of processing a published PCT application



Note: The average cost of a published PCT application is an estimation calculated by dividing the total processing cost by the number of published PCT applications. Historical data have been revised and may differ from previous reported data.

Source: WIPO Statistics Database, March 2013

25 The complete methodology is available at *www.wipo.int/edocs/mdocs/govbody/en/a_42/a_42_10-annex3.pdf.*

B.2

Receiving Offices

A PCT application is filed with an RO, which may be a national or regional patent office or the IB. There were 115 such ROs in 2012 responsible for receiving PCT applications, examining their compliance with PCT formality requirements, receiving the payment of fees and transmitting copies of the application for further processing to the IB and to the International Searching Authority (ISA). Figures A.1.2 and A.1.3 show the number of PCT applications filed in 2012 at selected ROs. A statistical table in the annex provides the number of PCT applications for all offices and origins.

B.2.1 Distribution of PCT applications by medium of filing and office

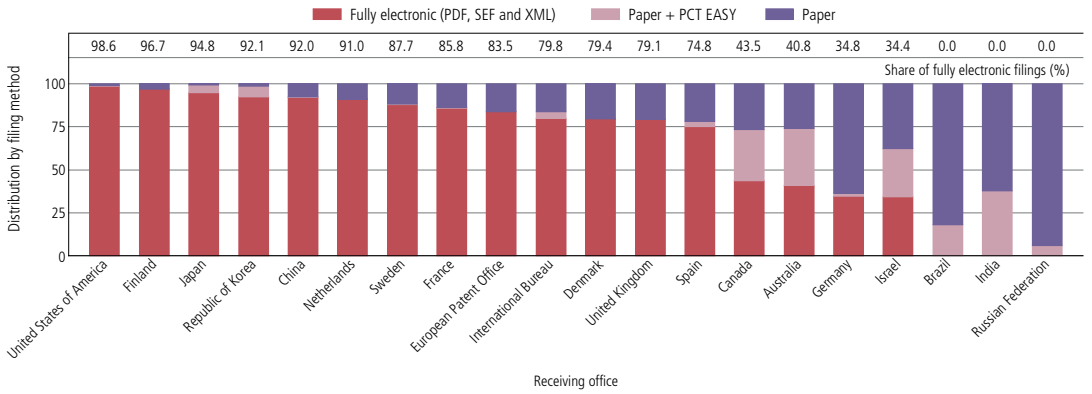
Figure B.2.1 shows the breakdown of PCT applications by medium of filing for the top 20 ROs.

Each RO determines the media of filing that applicants will be allowed to use. In 2012, the offices of Croatia, Lithuania, Norway and Portugal started receiving and processing PCT applications in fully electronic form, bringing to 28 the number of ROs that accept such filings.

At global level, the share of fully electronic filings was 87.4% in 2012 (see B.1.1). However, there was considerable variation across the top 20 ROs, ranging from 0% at the ROs of the Russian Federation, India and Brazil to 98.6% at the USPTO.

Fully electronic filings accounted for 98.6% of applications filed at the USPTO, representing an increase of three percentage points on 2011. Similarly, PCT-EASY filings represented about a third of filings at the Indian office, but only a quarter of filings the year before. However, paper filings remained dominant at the offices of the Russian Federation (92.7%), Brazil (81.8%), Germany (63.1%) and India (62.3%).

Figure B.2.1: Distribution of media of filing for top 20 receiving offices, 2012



Note: 2012 data are WIPO estimates.

Source: WIPO Statistics Database, March 2013

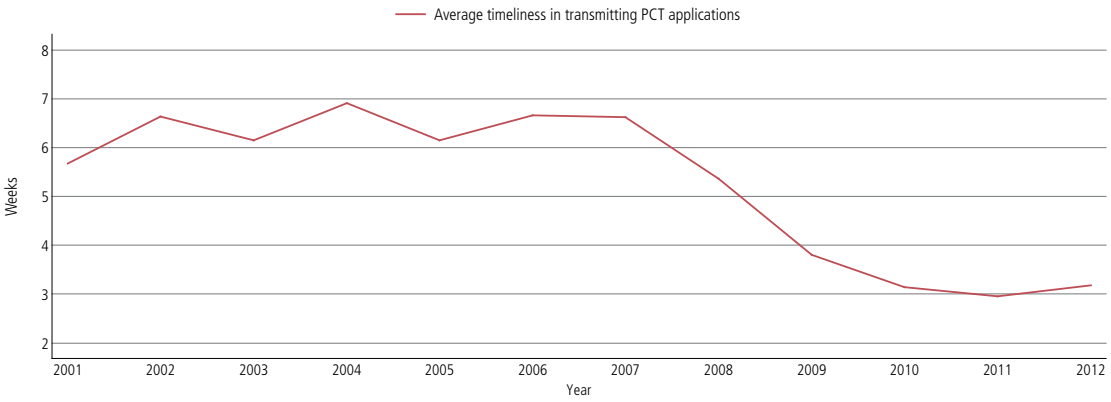
B.2.2 Timeliness in transmitting PCT applications

Figure B.2.2 presents statistics on the average timeliness of ROs in transmitting PCT applications to the IB.[26]

The PCT regulations provide that the copy of the PCT application sent by the RO must reach the IB before the expiration of the 13th month from the priority date. PCT applications are usually filed before the expiration of 12 months from the priority date. Where this is the case, the IB should receive the application within one month of the international filing date.

Since 2007, there has been considerable improvement in the timeliness in transmitting PCT applications to the IB. Between 2001 and 2007, the average transmission time varied between six and seven weeks from the international filing date. However, since 2010, this time has been cut in half, to around three weeks (3.2 weeks in 2012). This is partly attributable to a shift towards electronic filing that has made the exchange of information between ROs and the IB more efficient.

Figure B.2.2: Average timeliness in transmitting PCT applications to the IB



Note: Timeliness is calculated as the time elapsed between the international filing date and the date on which the IB received the PCT application from the receiving office. Applications transmitted under PCT article 19.4 are excluded.

Source: WIPO Statistics Database, March 2013

26 A copy of the PCT application, known as the record copy, is transmitted to the IB by the RO for processing, publication and communication.

B.2.3 Timeliness in transmitting PCT applications by time category

Figure B.2.3 presents a breakdown of Figure B.2.2 according to three time categories.

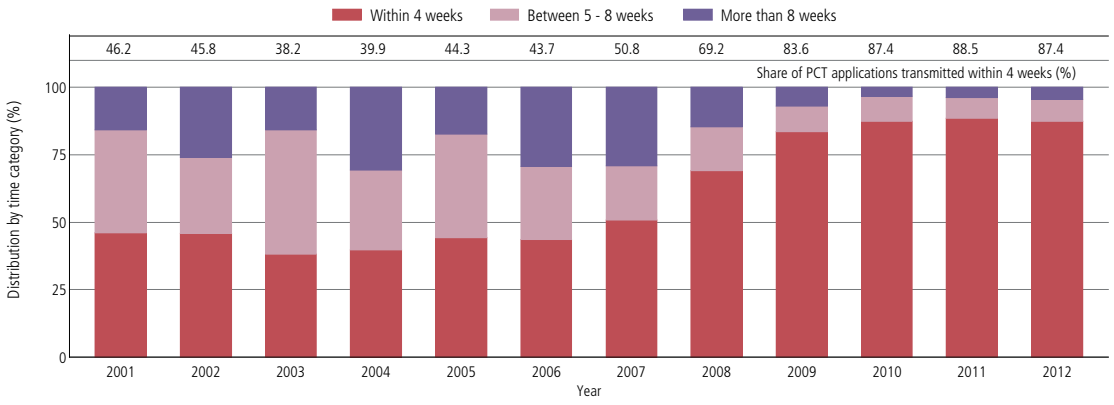
The share of PCT applications transmitted to the IB within 4 weeks from filing remained relatively stable between 2001 and 2006. It then increased considerably until 2011. In 2012, the share of PCT applications transmitted to the IB within 4 weeks from filing (87.4%) had slightly decreased compared to the previous year, with a 1.1 percentage point reduction.

B.2.4 Timeliness in transmitting PCT applications by time category and office

Figure B.2.4 shows information on timeliness in transmitting record copies to the IB for the 20 offices having received the most PCT applications in 2012.

The timeliness in transmitting PCT applications to the IB varied widely from one office to another. Offices receiving numerous PCT applications on paper (see B.2.1) tended to rank lower in terms of timeliness in transmitting. For example, the overall average share of PCT applications transmitted within five weeks is 87.4%. However, for offices that received a higher rate of paper applications, the share of PCT applications transmitted within 4 weeks was below the overall average. This is the case for the offices of Germany (36.7%), India (16.8%) and the Russian Federation (0.3%). However, Israel and Austria, which also received substantial shares of PCT applications filed on paper, both ranked in 2012 among the offices transmitting the highest shares of their applications within 4 weeks, with respective shares of 99.3% and 98%.[27] This shows that other factors than the medium of filing may explain the differences in transition time.

Figure B.2.3: Timeliness in transmitting PCT applications to the IB by time category

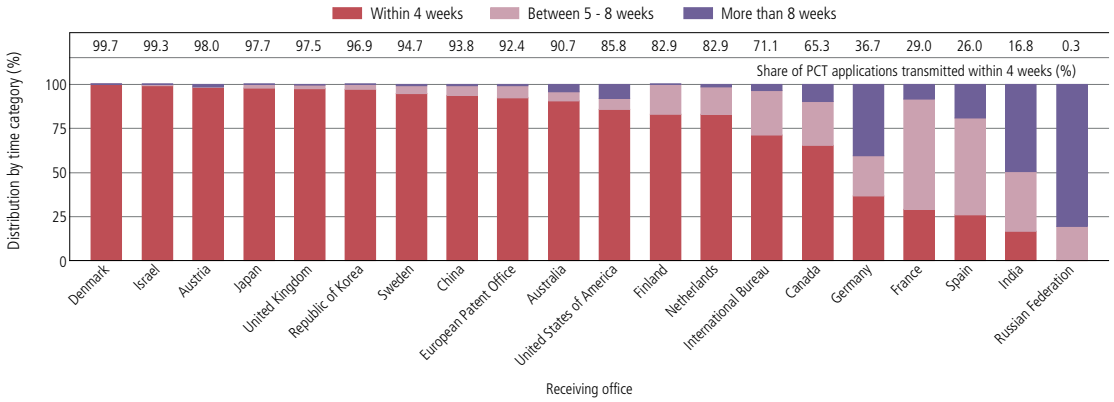


Note: Timeliness is calculated as the time elapsed between the international filing date and the date on which the IB received the PCT application from the receiving office. Applications transmitted under PCT article 19.4 are excluded.

Source: WIPO Statistics Database, March 2013

27 Data for the office of Austria are not shown in B.2.1. In 2012, 57% of PCT applications received by this office were filed on paper.

Figure B.2.4: Timeliness in transmitting PCT applications to the IB by time category and receiving office, 2012



Note: Timeliness is calculated as the time elapsed between the international filing date and the date on which the IB received the PCT application from the receiving office. Applications transmitted under PCT article 19.4 are excluded.

Source: WIPO Statistics Database, March 2013

B.3

International Searching Authorities

Each PCT application must undergo an international search carried out by an ISA. ROs have agreements with at least one but sometimes several ISAs that carry out international searches. Where an RO has an agreement with multiple ISAs, the PCT applicant must select one of them.

Once the ISA has performed the search, the applicant receives an ISR containing a list of documents relevant for assessing the patentability of the invention. The ISA also establishes a written opinion giving a detailed analysis of the potential patentability of the invention in light of the documents found in the search.

In 2012, 15 national patent offices or regional organizations were acting as ISAs with the Israel Patent Office beginning to operate as an ISA on June 1, 2012. [28]

28 The national patent offices of Chile, Egypt and India have been appointed as ISAs (bringing to 18 the total number of ISAs); however, these offices had not commenced operations in 2012 (the office of Egypt will began operating on April 1, 2013).

B.3.1 International Search Reports by ISA and country of origin

Table B.3.1 shows the distribution of ISRs by ISA from 2008 to 2012. It also provides data, for each ISA, on the number of ISRs established for the three main origins that selected them.

In 2012, the EPO remained the most selected ISA, with 38.5% of all ISRs issued, followed by the JPO (21.5%) and KIPO (14.1%).

The office of the Russian Federation doubled (+105.5%) the volume of ISRs it issued in 2012, mainly because of the number of US applications received, which was 61 times higher in 2012 (1,355 ISRs issued) than in the previous year (22 ISRs issued), representing 56% of the ISRs issued by this ISA. With respective increases of 15.2% and 12.8% on 2011, SIPO and JPO also experienced substantial growth in ISRs issued.

The office of Israel started issuing ISRs in 2012, initially for PCT applications filed at its office, or with the IB as RO by applicants who are eligible to file with the office of Israel. As a consequence, the vast majority of ISRs issued (92%) were for applications filed by Israeli applicants.

Since 2010, the Austrian Patent Office has experienced a sharp drop in ISRs issued, which is likely linked to a 1,500 euro increase in its search fee.

Table B.3.1: Distribution of International Search Reports by ISA and origin

International Searching Authorities	Total plus the Top Three Origins	International Filing Year					2012 Share (%)	Change compared to 2011 (%)
		2008	2009	2010	2011	2012		
Australia	Australia	1,854	1,667	1,702	1,632	1,547		
	Singapore	370	328	400	380	388		
	United States of America	26	152	457	390	316		
	Total	**2,753**	**2,665**	**3,423**	**3,140**	**2,822**	**1.5**	**-10.1**
Austria	South Africa	15	119	60	82	81		
	Singapore	66	115	21	20	25		
	Republic of Korea	318	575	139	39	18		
	Total	**1,193**	**1,588**	**409**	**251**	**161**	**0.1**	**-36.0**
Brazil	Brazil		65	307	431	426		
	Uruguay		1	0	0	1		
	Panama		0	0	0	1		
	United Kingdom		0	0	0	1		
	Argentina		0	0	0	1		
	Total		**66**	**310**	**434**	**430**	**0.2**	**-1.0**
Canada	Canada	2,314	1,942	2,094	2,295	2,166		
	United States of America	53	41	35	26	79		
	Switzerland	21	7	12	13	19		
	Total	**2,478**	**2,053**	**2,208**	**2,396**	**2,324**	**1.2**	**-3.0**
China	China	5,935	7,723	12,111	16,197	18,340		
	United States of America	115	138	295	496	903		
	India	15	5	219	225	245		
	Total	**6,188**	**8,095**	**13,273**	**18,017**	**20,757**	**10.7**	**15.2**
European Patent Office	United States of America	21,153	17,881	16,963	17,634	18,562		
	Germany	18,698	16,690	17,426	18,524	18,473		
	France	6,918	6,991	7,054	7,223	7,547		
	Total	**77,910**	**69,959**	**68,939**	**71,627**	**74,799**	**38.5**	**4.4**
Finland	Finland	635	845	903	914	971		
	Switzerland	0	4	0	0	4		
	United States of America	0	0	4	4	2		
	Total	**660**	**860**	**921**	**928**	**980**	**0.5**	**5.6**
Israel	Israel					332		
	United States of America					13		
	United Kingdom					4		
	Total					**362**	**0.2**	
Japan	Japan	26,983	28,307	30,597	36,903	41,531		
	United States of America	54	61	91	44	161		
	Sweden	29	23	40	13	41		
	Total	**27,117**	**28,446**	**30,856**	**37,094**	**41,852**	**21.5**	**12.8**
Nordic Patent Institute	Norway	64	158	189	118	133		
	Denmark	35	72	97	134	129		
	Iceland	2	3	9	9	13		
	Total	**102**	**239**	**299**	**275**	**279**	**0.1**	**1.5**
Republic of Korea	United States of America	10,904	13,453	12,995	15,906	14,685		
	Republic of Korea	7,553	7,434	9,342	10,225	11,781		
	Canada	95	147	149	218	223		
	Total	**19,020**	**21,715**	**23,303**	**27,139**	**27,442**	**14.1**	**1.1**
Russian Federation	United States of America	14	21	4	22	1,355		
	Russian Federation	707	654	745	914	762		
	Ukraine	73	66	77	114	88		
	Total	**892**	**849**	**937**	**1,180**	**2,424**	**1.2**	**105.5**
Spain	Spain	957	1,087	1,154	1,106	1,038		
	Mexico	166	149	168	169	151		
	Chile	5	36	61	88	72		
	Total	**1,201**	**1,351**	**1,453**	**1,445**	**1,372**	**0.7**	**-5.1**
Sweden	Sweden	1,894	1,554	1,383	1,397	1,213		
	Finland	107	208	375	317	219		
	Norway	201	117	126	131	82		
	Total	**2,338**	**2,039**	**2,074**	**1,940**	**1,582**	**0.8**	**-18.5**
United States of America	United States of America	19,291	13,835	14,142	14,476	15,018		
	Israel	850	652	712	661	495		
	India	122	94	152	221	202		
	Total	**21,380**	**15,461**	**15,902**	**16,460**	**16,815**	**8.6**	**2.2**
Unknown		8	20	31	50	0		
Total		**163,240**	**155,406**	**164,338**	**182,376**	**194,400**	**100**	**6.6**

Note: 2012 data are WIPO estimates.

Source: WIPO Statistics Database, March 2013

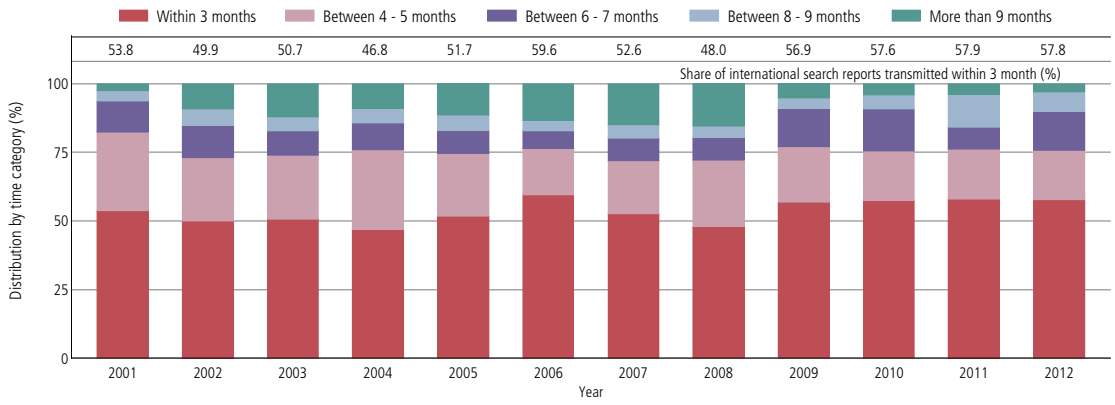
B.3.2 Timeliness in transmitting ISRs measured from receipt of search copy

PCT Rule 42 sets a time limit such that the ISA must establish the ISR three months from receipt of a copy of the application (the so-called "search copy") by the ISA, or nine months from the priority date (or, if no priority is claimed, from the international filing date), whichever time limit expires later.

Figure B.3.2 shows timeliness in transmitting the ISR where the applicable time limit under Rule 42 for establishing the ISR is three months from receipt of the search copy, rather than nine months from the priority date. In 2012, 75% of ISRs were established within this time limit.[29]

The share of ISRs transmitted within three months of the date of receipt of the search copy has remained stable since 2009, fluctuating between 56.9% and 57.9%. The 2012 share is in the upper range, with 57.8% of ISRs transmitted within three months.

Figure B.3.2: Timeliness in transmitting ISRs to the IB measured from date of receipt of search copy by time category



Note: Timeliness is calculated as the time elapsed between the date on which the ISA receives a copy of the PCT application and the date on which the ISA transmits the ISR to the IB (or, if applicable, the date of receipt of the Article 17(2)(a) declaration). This figure shows timeliness in establishing the ISR where the applicable time limit under Rule 42 for establishing the ISR is three months from receipt of the search copy.

Source: WIPO Statistics Database, March 2013

29 In other words, this indicator only includes cases where the date of receipt of the search copy by the ISA plus three months is later than the priority date plus nine months. The date of receipt of the search copy was missing for 11% of ISRs received at the IB that year, and these are, therefore, not included in the figure.

B.3.3 Timeliness in transmitting ISRs measured from receipt of search copy by time category and ISA

Figure B.3.3 presents the same information for 2012 as in Figure B.3.2, but provides a breakdown by ISA.

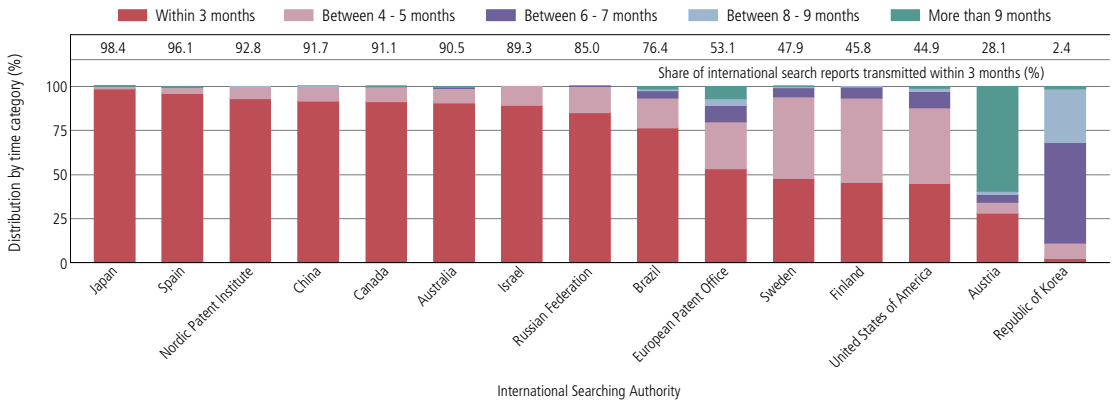
The share of ISRs transmitted within three months varied greatly across offices, ranging from 98.4% at the JPO to 2.4% at KIPO. Six offices had over 90% of ISRs transmitted within three months in 2012. In contrast, six offices were below average (57.8%) in transmitting ISRs within three months.

B.3.4 Average timeliness in transmitting ISRs measured from priority date

In practice, since the technical preparations for publishing a PCT application take approximately one month and should finish 15 days before the publication date, the establishment of the ISR and its transmission to the IB within 16 to 17 months from the priority date still allows the IB to publish the ISR with the application. ISRs received by the IB after the completion of technical preparations for publication are published separately later.

Since 2009, timeliness has dramatically improved thanks to the electronic transmittal of numerous ISRs to the IB. At 16.2 months, average timeliness in transmitting ISRs to the IB in 2012 showed continued improvement over past averages and was the mostly timely average of the trend shown in Figure B.3.4.

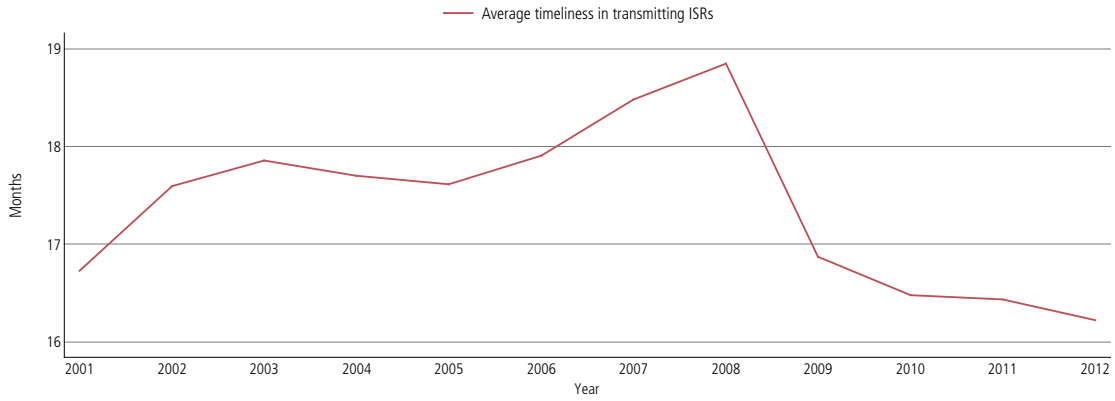
Figure B.3.3: Timeliness in transmitting ISRs to the IB measured from date of receipt of search copy by time category and ISA, 2012



Note: Timeliness is calculated as the time elapsed between the date on which the ISA receives a copy of the PCT application and the date on which the ISA transmits the ISR to the IB (or, if applicable, the date of receipt by the IB of the Article 17(2)(a) declaration). This figure shows timeliness in establishing the ISR where the applicable time limit under Rule 42 for establishing the ISR is three months from receipt of the search copy.

Source: WIPO Statistics Database, March 2013

Figure B.3.4: Average timeliness in transmitting ISRs to the IB measured from priority date



Note: Timeliness is calculated as the time elapsed between the priority date and the date on which the ISA transmits the ISR to the IB (or, if applicable, the date of receipt by the IB of the Article 17(2)(a) declaration).

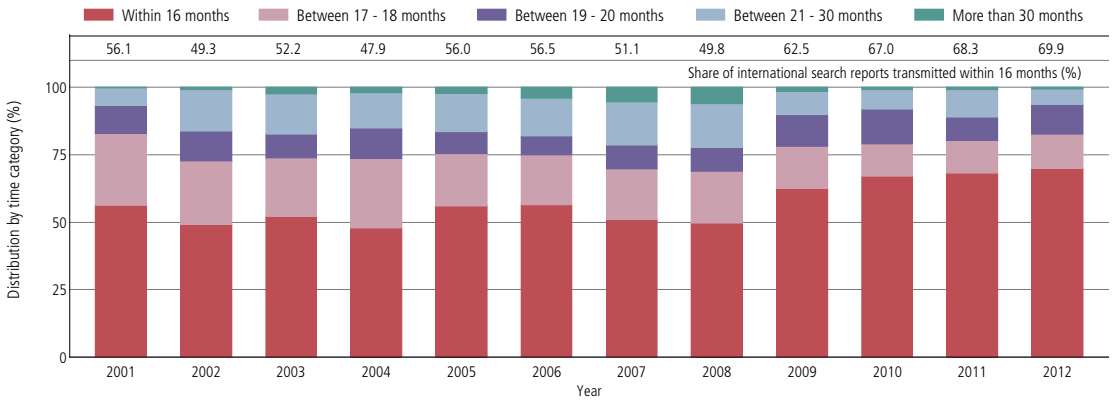
Source: WIPO Statistics Database, March 2013

B.3.5 Timeliness in transmitting ISRs measured from priority date by time category

Figure B.3.5 presents the same data shown in Figure B.3.4, but broken down by five categories of timeliness in transmitting ISRs to the IB.

In 2012, 69.9% of ISRs were received by the IB within 17 months from the priority date and were thus in time to be included in the international publication. The share of ISRs received within more than 20 months also improved, representing 6.4% of total ISRs or a decrease of 4.7 percentage points compared to 2011.

Figure B.3.5: Timeliness in transmitting ISRs to IB measured from priority date by time category



Note: Timeliness is calculated as the time elapsed between the priority date and the date on which the ISA transmits the ISR to the IB (or, if applicable, the date of receipt by the IB of the Article 17(2)(a) declaration).

Source: WIPO Statistics Database, March 2013

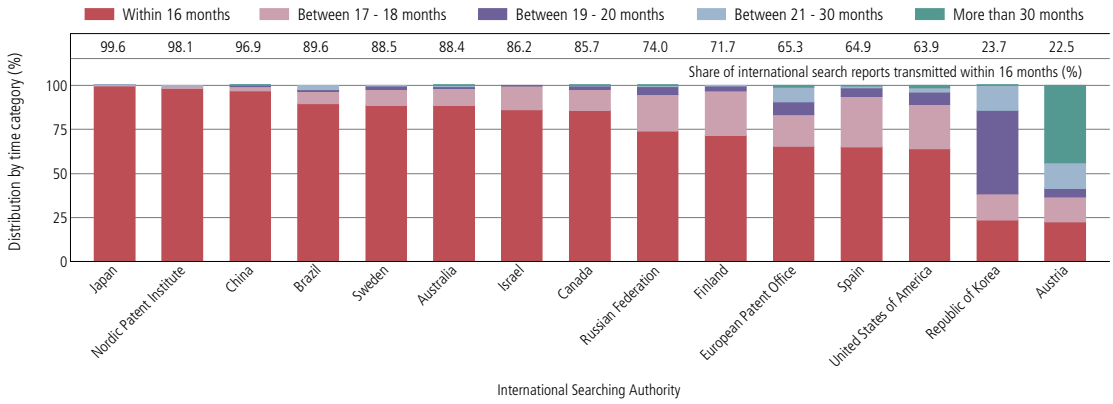
B.3.6 Timeliness in transmitting ISRs measured from priority date by time category and ISA

Figure B.3.6 presents the same timeliness information for 2012 as in Figures B.3.4 and B.3.5, additionally broken down by ISA.

Timeliness in transmitting ISRs varied significantly across ISAs. The JPO, the Nordic Patent Institute and SIPO transmitted, respectively, 99.6%, 98.1% and 96.9% of ISRs within 16 months from the priority date.

In contrast, 63.3% and 61.9% of ISRs established by the Austrian Patent Office and KIPO, respectively, were transmitted after the publication of the PCT application (more than 18 months from the priority date). It should be noted, however, that the share of ISRs transmitted after publication by KIPO decreased by 15.7 percentage points in one year – from 77.6% in 2011 to 61.9% in 2012.

Figure B.3.6: Timeliness in transmitting ISRs to IB measured from priority date by time category and ISA, 2012



Note: Timeliness is calculated as the time elapsed between the priority date and the date on which the ISA transmits the ISR to the IB (or, if applicable, the date of receipt by the IB of the Article 17(2)(a) declaration).

Source: WIPO Statistics Database, March 2013

B.4

Supplementary International Searching Authorities

Since 2009, the Supplementary International Search (SIS) service has allowed PCT applicants to request searches in additional languages, complementing the search performed by the main ISA.

B.4.1 Supplementary International Search Reports by SISA

Table B.4.1 presents the distribution of SIS requests made by applicants since the beginning of this service in 2009, before each Authority specified for Supplementary International Search (SISA).

There were 46 SIS requests made in 2012, representing an increase of five requests over 2011. The number of requests made before the EPO increased by 14, while those made before the office of the Russian Federation declined by 12. Two offices – the EPO and the Russian Federation – accounted for 87% of total 2012 requests.

Table B.4.1: Distribution of Supplementary International Search Reports by SISA

Supplementary International Searching Authority	Year of Supplementary International Search			
	2009	2010	2011	2012
Austria			1	2
European Patent Office		3	7	21
Finland				1
Russian Federation	23	35	31	19
Sweden	2	2	2	
Nordic Patent Institute		1		3
Total	**25**	**41**	**41**	**46**

Note: The figures for 2012 may be incomplete.

Source: WIPO Statistics Database, March 2013

B.5

International Preliminary Examining Authorities

PCT applicants can request an optional International Preliminary Examination (IPE) with a competent International Preliminary Examining Authority (IPEA). The selection of a competent IPEA is based on negotiated agreements between ROs and IPEAs.

Once the IPE has been carried out, an International Preliminary Report on Patentability (IPRP) is sent by the IPEA to the applicant, who is then better placed to make an informed decision as to whether to enter the PCT national phase. The report is also transmitted to all national offices in their capacity as "elected" office.[30] Patent offices, in examining the PCT application during the national phase, take into account the IPRP when considering the patentability of the underlying invention.

In 2012, 15 national patent offices or regional organizations were acting as IPEAs with the Israel Patent Office beginning to operate as an IPEA on June 1, 2012. [31]

30 "Elected" offices are national or regional offices at which the PCT application has potential legal effect.

31 The national patent offices of Chile, Egypt and India have been appointed as IPEAs (bringing to 18 the total number of IPEAs); however, these offices had not commenced operations in 2012 (the office of Egypt will began operating on April 1, 2013).

B.5.1 International Preliminary Reports on Patentability by IPEA

The number of IPRPs issued in 2012 increased by 4.1% over 2011, corresponding to a total volume of 15,716 reports. This was the first time that the number of IPRPs issued increased since the modification of the time limit for entry into the PCT national phase, which entered into force in April 2002.

Most of this increase can be attributed to the EPO (+571 reports on 2011 or +8%) and the JPO (+536 reports or +24.3%), and compensated for the sharp decrease observed at the USPTO (-839 reports or -24.2%).

Table B.5.1: Distribution of IPRPs by IPEA

International Preliminary Examining Authority	Year					2012 Share (%)	Change compared to 2011 (%)
	2008	2009	2010	2011	2012		
Australia	826	724	850	701	820	5.2	17.0
Austria	100	113	61	28	13	0.1	-53.6
Brazil				15	45	0.3	200.0
Canada	419	427	258	184	360	2.3	95.7
China	396	425	394	340	451	2.9	32.6
European Patent Office	10,854	9,584	8,264	7,177	7,748	49.3	8.0
Finland	184	132	139	122	114	0.7	-6.6
Japan	2,376	2,175	1,905	2,205	2,741	17.4	24.3
Nordic Patent Institute		11	34	40	38	0.2	-5.0
Republic of Korea	476	368	308	248	249	1.6	0.4
Russian Federation	90	109	62	67	77	0.5	14.9
Spain	117	135	109	148	108	0.7	-27.0
Sweden	724	523	409	357	329	2.1	-7.8
United States of America	2,181	2,150	2,879	3,462	2,623	16.7	-24.2
Total	**18,743**	**16,876**	**15,672**	**15,094**	**15,716**	**100.0**	**4.1**

Note: The figures for 2012 may be incomplete.

Source: WIPO Statistics Database, March 2013

B.5.2 Timeliness in transmitting IPRPs

Similar to the establishment of search reports (see B.3.2), the PCT regulations set a time limit for establishing the IPRP: 28 months from the priority date; six months from the start of the preliminary examination; or six months from the date of receipt of the translated application document by the IPEA (where relevant) – whichever time limit expires latest.

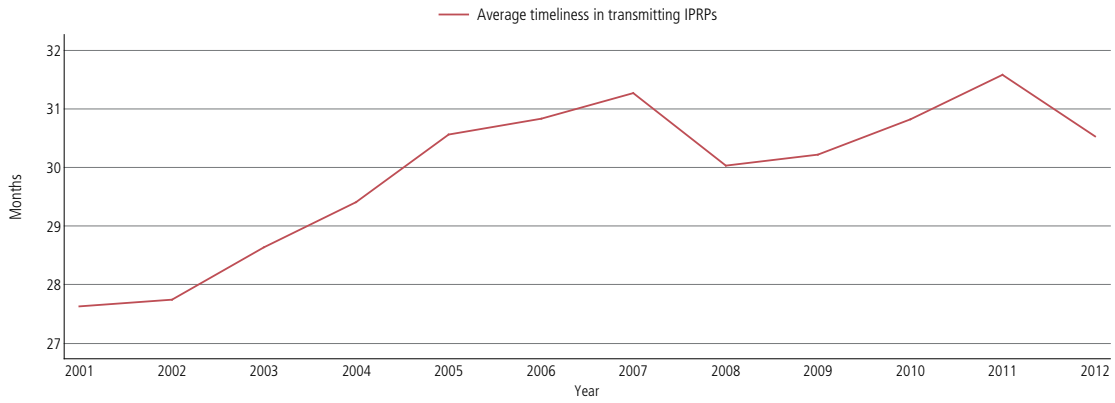
In practice, most applicants enter the PCT national phase immediately before the expiration of the time limit set by the PCT, that is, 30 months from the priority date. The establishment of IPRPs before 28 months from the priority date is therefore intended to give applicants two months, in principle, to evaluate the IPRP and consider its impact on the decision to enter the PCT national phase.

Figure B.5.2 presents information on average timeliness in transmitting IPRPs to the IB. Timeliness here is measured using the date the IB receives reports, rather than the date on which the reports were established. The measurement may thus be influenced by transmittal times.

Average time in transmitting IPRPs has markedly increased over the past decade. Since 2001, the delay in transmitting IPRPs has almost constantly increased. The only two exceptions were 2008 and 2012.

In 2012, the average time taken to transmit IPRPs decreased by about one month: from 31.6 months in 2011 to 30.5 in 2012.

Figure B.5.2: Average timeliness in transmitting IPRPs to the IB



Note: Timeliness is calculated as the time elapsed between the priority date and the date on which the IB received the IPRP from the IPEA.

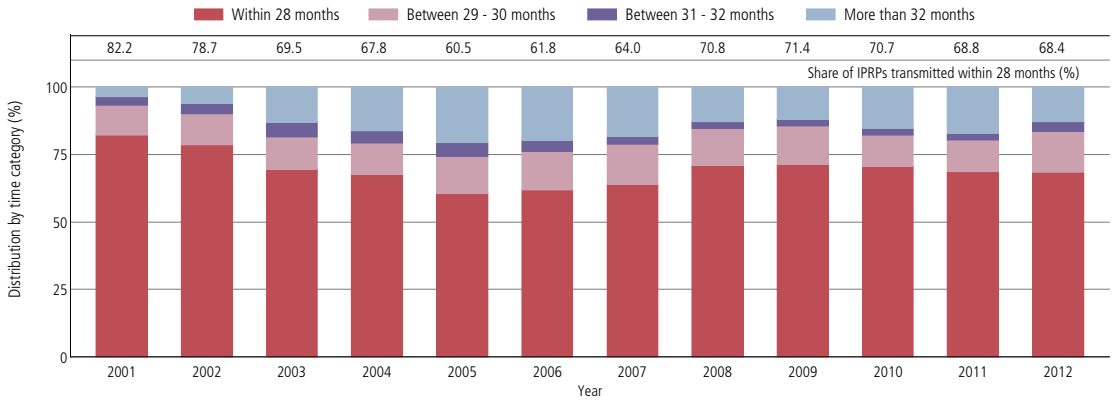
Source: WIPO Statistics Database, March 2013

B.5.3 Timeliness in transmitting IPRPs by time category

Figure B.5.3 presents the same data as in Figure B.5.2, but broken down by four categories corresponding to timeliness in transmitting IPRPs to the IB.

The share of IPRPs transmitted within 28 months (68.4%) remained almost stable in 2012 compared to the previous year. However, the number of IPRPs transmitted after 32 months decreased from 17.2% to 13% over the same period.

Figure B.5.3: Timeliness in transmitting IPRPs to the IB by time category



Note: Timeliness is calculated as the time elapsed between the priority date and the date on which the IB received the IPRP from the IPEA.

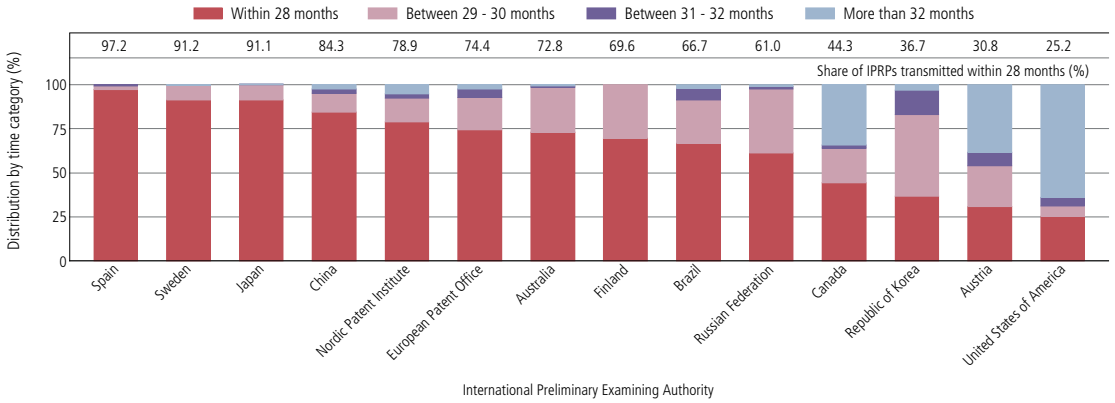
Source: WIPO Statistics Database, March 2013

B.5.4 Timeliness in transmitting IPRPs by time category and IPEA

Figure B.5.4 presents the same timeliness information for 2012 as in figures B.5.2 and B.5.3, but provides a breakdown by IPEA.

In 2012, the offices of Spain, Sweden and Japan transmitted, respectively, 97.2%, 91.2% and 91.1% of IPRPs within 28 months from the priority date of the application; whereas the USPTO, the offices of Austria and Canada transmitted, respectively, 63.9%, 38.5% and 34.3% of IPRPs later than 32 months from the priority date of the application.

Figure B.5.4: Timeliness in transmitting IPRPs to the IB by delay and IPEA, 2012



Note: Timeliness is calculated as the time elapsed between the priority date and the date on which the IB received the IPRP from the IPEA.

Source: WIPO Statistics Database, March 2013

B.6

PCT-PPH Pilots

Use of the PCT-Patent Prosecution Highway (PCT-PPH) pilots enables applicants, where a favorable written opinion or IPRP has been issued by the participating ISA and/or IPEA, to fast-track patent examination procedures in the national phase and, generally, to obtain a patentability decision more quickly from participating offices.

In 2012, 38 PCT-PPH pilots were active, with the participation of 21 offices, including 14 international authorities.

B.6.1 New PCT-PPH pilots

The following offices started bilateral PCT-PPH pilots in 2012:

- Danish Patent and Trademark Office (Denmark) and Federal Service for Intellectual Property (Rospatent) (Russian Federation);
- Rospatent and SIPO;
- JPO and KIPO;
- KIPO and SIPO;
- Industrial Property Office (Czech Republic) and USPTO;
- Intellectual Property Office (Philippines) and JPO;
- Israel Patent Office and National Board of Patents and Registration of Finland;
- Israel Patent Office and USPTO; and
- National Institute of Industrial Property (Portugal) and JPO.

It is also noteworthy that the requirements of the United Kingdom Intellectual Property Office for its own PCT (UK) Fast Track service were relaxed with effect from June 8, 2012, so that it is no longer necessary for all claims to meet the requirements of novelty, inventive step and industrial applicability.

B.6.2 PCT-PPH requests by international authority and office

Table B.6.2 shows the distribution of PCT-PPH requests made in 2012 by ISA or IPEA and by designated or elected office.

Requests for PCT-PPH fast-track patent examination made during the national phase grew by 60.8% in 2012, increasing from 2,847 requests in 2011 to 4,577 in 2012. The USPTO received 2,674 requests in 2012, making it the most chosen office of destination, followed by the JPO (1,021 requests) and SIPO (400). Out of 21 participating offices, 12 received requests for PCT-PPH fast-track examination in 2012.

The international authorities (ISA or IPEA) the reports and opinions of which were most often relied upon as the basis of PCT-PPH requests in 2012 were the JPO (1,686 requests), followed by KIPO (1,230) and the EPO (936).

Table B.6.2: Distribution of PCT-PPH requests by international authority and office of PCT national phase entry, 2012

International Authority	Office of PCT National Phase Entry												
	US	JP	CN	EP	KR	CA	AU	RU	PH	SE	MX	ES	Total
Japan	427	769	181	196	96				8	5	3	1	1,686
Republic of Korea	964	12	205		49								1,230
European Patent Office	733	203											936
China	194	15			3			1					213
United States of America	129	11	14	25	15		5	9		0		1	209
Australia	104						6						110
Nordic Patent Institute	54	4											58
Canada						57							57
Sweden	41	5								0			46
Russian Federation	10		0									0	10
Austria	9												9
Finland	6	0						0				0	6
Spain	2	2						1			1		6
Israel	1												1
Total	**2,674**	**1,021**	**400**	**221**	**163**	**57**	**11**	**11**	**8**	**5**	**4**	**2**	**4,577**

Note: US (United States of America), JP (Japan), CN (China), EP (European Patent Office), KR (Republic of Korea), CA (Canada), AU (Australia), RU (Russian Federation), PH (Philippines), SE (Sweden), MX (Mexico), ES (Spain).

Source: WIPO, based on data from the JPO, March 2013

B.6.3 Additional statistics on PCT-PPH applications

The table below compares the July to December 2012 statistics for PCT-PPH applications with total patent applications for certain key elements of the patent examination procedure. Note that due to significant differences in patenting procedures among offices, a cross-office comparison is not relevant.

The grant rate and percentage of the first action allowance are significantly higher for PCT-PPH applications, e.g., in the US 92% of PCT-PPH applications were granted but only 52% of all applications combined were granted. The difference in first action allowance between PCT-PPH applications (24%) and all applications (14%) is also significant.

In addition, the pendency time is shorter and the number of actions reduced for PCT-PPH applications compared to all applications combined, e.g., in Japan the average final decision pendency was 3.8 months for PCT-PPH applications compared to 28 months for all applications combined. The average number of office actions was reduced to 0.5 for PCT-PPH applications compared to 1.1 for all applications combined.

Table B.6.3: Additional statistics on PCT-PPH applications, July to December 2012

Additional Statistics	Office of PCT National Phase Entry					
	AU	CA	JP	KR	MX	US
Grant percentage (%)						
PCT-PPH Applications	100	100	96	87	100	92
All Applications combined		71	68			52
First action allowance percentage (%)						
PCT-PPH Applications	50	58	63	36*	50	24
All Applications combined		6	15			14
Average first action pendency (months)						
PCT-PPH Applications	1.2	1.6	2.3	2.2	2.7	5.9
All Applications combined		18.9	19.0			23.7
Average final decision pendency (months)						
PCT-PPH Applications	3.1	4.6	3.8	4.4	3.7	7.0
All Applications combined		37.8	28.0			33.8
Average number of office actions						
PCT-PPH Applications	0.7	0.3	0.5		0.5	
All Applications combined		1.6	1.1			2.5

Note: AU (Australia), CA, (Canada), JP (Japan), KR (Republic of Korea), MX (Mexico), US (United States of America). * Number of decisions to grant a patent as first office action divided by total first office actions.

Source: WIPO, based on data from the JPO, March 2013

SECTION C
DEVELOPMENT OF THE PCT SYSTEM

C.1

PATENTSCOPE Search System

The PATENTSCOPE search service is the authoritative source of information on published PCT applications. This free-of-charge service also provides access to the national or regional patent collections of a number of offices worldwide. In 2012 it contained about 19 million patent documents - among which all published PCT applications - and offered a wide range of features for simplifying searches and improving relevancy of results.

C.1.1 PCT licensing feature

Since January 1, 2012, a new feature on PATENTSCOPE has enabled PCT applicants to indicate their willingness to license the inventions in their PCT applications. Applicants' wishes with regard to licensing are reflected in PATENTSCOPE in the bibliographic data relating to a specific application. The licensing availability request submitted by the applicant is also included as a separate document under the "Documents" tab in PATENTSCOPE, and the existence of licensing indications has been added to the PATENTSCOPE search criteria. In 2012, applicants used this feature for 167 PCT applications.

C.1.2 New features

Further to the introduction, on July 2, 2012, of a new third party observation system, a "Submit observation" link was added in the bibliographic data tab in PATENTSCOPE (for further information on third party observations, see C.2.2).

Additional languages have been made available for multilingual searches. Dutch, Italian and Swedish were added to WIPO's Cross-Lingual Information Retrieval (CLIR) facility, which was already available in Chinese, English, French, German, Japanese, Korean, Portuguese, Russian and Spanish. This tool first finds synonyms for a search query, and then translates the search query and synonyms into several other languages using special software developed by WIPO, thus enhancing the scope of PATENTSCOPE search results.

A new button labeled "Machine translation" was introduced in the search result list of PATENTSCOPE. This button launches Google Translate™ or an alternative machine translation, such as Microsoft® Translator, if the language of the search results is different from the language of the interface. It is also available in the description, claims and full-text tabs.

Lastly, a question mark was added next to the IPC code given in the search result list, and by hovering over it, information related to the IPC code is displayed.

C.1.3 Japan national collection

The national patent collection of Japan has been added to PATENTSCOPE. It includes about 7.5 million applications filed at the Japan Patent Office (JPO) since 1993. This brings to 29 the number of national and regional offices whose data are available in PATENTSCOPE.

C.1.4 New PCT Backfile products

To complete the collection of PCT data products offered by WIPO, three new data products were released: the PCT Backfile Asian Languages containing full-text description and claims for PCT applications published in Chinese, Japanese and Korean (1978 to 2011), the PCT Backfile XML containing PCT applications filed in XML format in all PCT languages (1978 to 2011) and the PCT Backfile Bibliographic containing a snapshot in XML of the PCT bibliographic data contained in PATENTSCOPE.

These are in addition to the PCT Backfile of non-Asian languages, which contains full-text description and claims (OCR output) for PCT applications published in English, French, German, Portuguese, Russian and Spanish, from 1978 to 2011.

C.2

ePCT System

The ePCT system enables applicants to securely review and consult online the most up-to-date bibliographic data and documents contained in their PCT applications, as stored in the IB's electronic processing system, including for those applications that have not yet been published.

The ePCT system comprises two parts: ePCT public services and ePCT private services. The latter require additional authentication with a digital certificate and allow the applicant to carry out semi-automated actions on PCT applications. At the beginning of 2012, ePCT was opened to all types of PCT applications regardless of the method of filing and the receiving office with which they were filed.

C.2.1 ePCT for applicants

New features were added to ePCT in 2012, among which the most notable functions enable applicants to:

- withdraw designations or priority claims;
- submit requests to the IB to indicate availability for licensing purposes on PATENTSCOPE;
- submit requests to the IB to retrieve a priority document from WIPO Digital Access Service for Priority Documents (DAS), by providing the relevant DAS access code;
- submit post-filing requests to the IB acting as receiving office to make available to the DAS a PCT application filed at this receiving office;
- submit observations on prior art and upload copies of cited documents to substantiate those observations;
- prepare and transmit to the IB declarations of inventorship under PCT rule 4.17(iv) following the entry into force of the America Invents Act; and
- grant a new level of access rights ("eViewer") enabling additional users to view the contents of the PCT application in ePCT private services without the possibility to make changes.

C.2.2 ePCT for third parties

In July 2012, it became possible to submit third party observations via ePCT public services, as well as copies of documents that substantiate those observations, and the possibility for the applicant to comment on third party observations using the upload documents function.

This service allows third parties to bring to the attention of international authorities and designated offices documents that they consider to be relevant to the novelty or inventive step of an invention claimed in a published PCT application.

This service was used for 61 attempted third party observations and two applicant observations in 2012. All but nine of the third party observations were submitted anonymously. All but three of the observations met the requirements for acceptance, and there were no cases suggesting deliberate attempts to abuse the system in order to inconvenience applicants or offices with prior art unlikely to be of relevance, which had been a concern during system development. As many as 98% of the documents referred to in third party observations were uploaded along with the observation so that they could be made available to designated offices and international authorities.[32]

C.2.3 ePCT for offices

A version of ePCT specifically for patent offices (ROs, ISAs and IPEAs) became available in 2012. Offices using the system can securely access the documents and bibliographic data on file at the IB in relation to PCT applications filed on or after January 1, 2009, and can upload documents electronically to the IB. Receiving offices can also transmit record copies to the IB and submit updates to bibliographic data relating to events in the life cycle of a PCT application, for example, the withdrawal of a PCT application or priority claims.

32 In order to take into account this new service, a new Part 8 to the Administrative Instructions under the PCT and an addendum to the PCT International Search and Preliminary Examination Guidelines were introduced with effect from July 1, 2012.

C.3

Legal Developments

Changes in the PCT Regulations that entered into force or were adopted by the Assembly of the International Patent Cooperation Union (PCT Assembly) in 2012, as well as the main legal changes at national or regional level having an impact on PCT filings, are presented below:

C.3.1 Changes to the legal framework

Amendments adopted by the PCT Assembly in September/October 2011, which entered into force on July 1, 2012, consist of the following:

a) an effective extension of the time limit within which the applicant can request the IB to obtain a priority document from a digital library (PCT rule 17.1(b-*bis*));
b) a clarification concerning the time limits in relation to correcting defects under PCT article 11 (PCT rule 20.7);
c) the incorporation of patent documents from China into the PCT minimum documentation used in carrying out international searches (PCT rule 34); and
d) the deletion of PCT rule 82.2 (interruption in the mail service) and the addition of a general provision for an excuse of delay in meeting certain PCT time limits due to *force majeure* circumstances (new PCT rule 82*quater* (excuse of delay in meeting time limits)).

As a consequence of the above-mentioned amendments to the regulations under the PCT, modifications to the administrative instructions under the PCT and to the PCT Receiving Office Guidelines were made accordingly, with effect from the same date.

The amendments adopted by the PCT Assembly in October 2012, which entered into force on January 1, 2013, serve to simplify the procedures for applicants from all PCT contracting states made possible by the enactment of the Leahy-Smith America Invents Act (for further information on the effects of this act on PCT applicants, see C.3.2). They include changes to:

a) PCT rules 4.15, 53.8 and 90*bis*.5 in relation to the matter of signatures; and
b) PCT rule 51*bis*.1 and 2 simplifying the provisions that allow documents containing oaths or declarations of inventorship to be required by the designated office in certain circumstances, and limiting the extent to which the designated office may require further documents or evidence relating to such oaths and declarations furnished during the international phase.

C.3.2 Changes consequential to the Leahy-Smith America Invents Act

Since the entry into force, on September 16, 2012, of certain changes to the patent law of the United States of America under the America Invents Act, there is no longer a requirement that inventors be named as applicants solely for the purpose of designating the US. This change has greatly simplified the signature requirements under the PCT. Notwithstanding this change, the US national law still requires that a US inventor's oath or declaration be submitted; however, the wording of that declaration has been amended.

Several PCT resources have been amended to take into account these important changes, namely the PCT Regulations (see C.3.1), the PCT request form, PCT-SAFE software, ePCT Private Services (addition of an online action to prepare and submit the US declaration of inventorship electronically), the administrative instructions under the PCT, the PCT Receiving Office Guidelines and the PCT Applicant's Guide.

Furthermore, to assist PCT users in implementing the change in practice resulting therefrom, detailed information was published in the PCT Newsletter, and frequently asked questions on the subject were made available on the PCT website.

C.4

Meetings

Several meetings take place every year involving the PCT international authorities, the IB, PCT member states and/or offices to ensure the regular operation of the system and to improve its performance and facilitate its use. The main developments in 2012 are described below.

C.4.1 Meeting of International Authorities under the PCT

The 19th session of the meeting of international authorities under the PCT was held in Canberra, Australia, from February 8 to 10, 2012. Discussions concerned:

a) the gathering of certain metrics concerning the documents cited by different ISAs, as well as the investigation of possibilities to more directly measure the use of international search results in the national phase;
b) continuing the study of standard clauses used by different international authorities in written opinions, with a view to producing a common model set of clauses;
c) the strengthening of the PCT International Search and Preliminary Examination Guidelines on providing comments in relation to clarity and support, as well as proposals to improve the quality and utility of ISRs and written opinions;
d) the submission by international authorities of their search strategies to the IB for publication on PATENTSCOPE;
e) the study of the technical requirements that would underlie a future proposal to amend PCT rule 34 (relating to PCT Minimum Documentation), which would aim at ensuring that patent documentation becomes available from a wider range of contracting states and is used effectively in international searches;
f) the importance of and barriers to work relating to accepting color drawings as part of PCT applications; and
g) recommendations that the IB propose the creation of a task force to revise WIPO standard ST.14 concerning the presentation of citations.

C.4.2 PCT Working Group

The fifth session of the PCT Working Group was held in Geneva from May 29 to June 1, 2012. The working group recommended proposed amendments to the PCT Regulations which were later adopted by the PCT Assembly, as set out under "Amendments agreed in 2012 that will enter into force in 2013", above. Other matters discussed included:

a) a proposal to make the written opinion of the ISA available to the public from the date of international publication rather than at 30 months from the priority date;
b) proposals to include "top up" searching as part of international preliminary examination and to allow accelerated processing of PCT applications on payment of a fee;
c) a proposal to allow filing of color drawings as part of electronically-filed PCT applications and to conduct all international phase processing (including international publication) in color on such PCT applications;
d) general proposals to improve the functioning of the PCT system, and to further improve PCT services and products; and
e) the possibility of amending PCT rule 34, as mentioned in C.5.1(e), above.

The working group approved a program of work to improve information on and consistency of interpretation of criteria relating to restoration of priority practice by all ROs and designated offices. Reports were given on the progress of the Collaborative Search and Examination Second Pilot Project, the ePCT system, work to introduce a new XML-based standard for presenting sequence listings and the creation of a task force to review WIPO Standard ST.14 concerning the presentation of citations in patent documents, including in ISRs.

C.4.3 PCT Assembly

The 43rd session of the PCT Assembly was held in Geneva from October 1 to 9, 2012, as part of the meetings of the assemblies of the member states of WIPO. The PCT Assembly adopted amendments to the PCT Regulations, which entered into force on January 1, 2013, as outlined under section C.3.1, and also appointed the National Institute of Industrial Property of Chile as an International Searching and Preliminary Examining Authority. The appointment will become effective on a future date to be notified by the office when it is ready to begin operations.

C.5

PCT Training and survey

The IB offers training sessions and provides training materials on the PCT system to a wide range of interested parties worldwide. It also conducts a yearly survey in order to improve its services to offices. The main developments in 2012 are given below.

C.5.1 Seminars

The PCT Legal Division participated in 62 seminars specifically for PCT users held in 15 countries (China, Colombia, Finland, France, Germany, Italy, Japan, Peru, Poland, Romania, Spain, Sweden, Switzerland, the United Kingdom and the US) and at WIPO headquarters.

The seminars were provided in six languages (Chinese, English, French, German, Japanese and Spanish). Additionally, in 2012, staff of the PCT Legal Division gave 39 presentations on the PCT to users and potential users.

C.5.2 Webinars

In 2012, "PCT update" webinars were given in all 10 PCT publication languages. A total of 788 participants took part in the 15 webinars given. The recordings and accompanying PowerPoint presentations are available on the PCT website.[33]

C.5.3 Distance learning

The introductory PCT distance learning course entitled "Introduction to the PCT", which is available in all 10 PCT publication languages, was followed via the Internet by 4,572 participants in 148 countries in 2012.

C.5.4 Office Feedback Survey

The PCT office feedback survey is conducted to gather feedback from offices regarding the services the IB provided in the previous year, in order to monitor progress and identify further improvement priorities.

In early 2012 the survey was sent to 149 offices acting as ROs, ISAs, IPEAs and/or designated or elected offices under the PCT regarding the services the IB provided to offices during 2011. The results of the survey, which reflect the responses from the 69 offices that responded, were published on the PCT website in June 2012.[34]

The PCT office feedback survey requests feedback regarding six categories of PCT services, namely, cooperative activities, IT tools, meetings, operations, document availability and translation.

The results of the survey reflected levels of satisfaction with those services of between 93% and 100%. According to the 2010 survey, the satisfaction range was between 90% and 98%.

33 Available at *www.wipo.int/pct/en/seminar/webinars/index.html*

34 Available at *www.wipo.int/pct/en/activity/pct_office_survey_2011.pdf*

STATISTICAL TABLE

The following table shows the number of PCT applications filed in 2012 and the number of PCT national phase entries in 2011 by office and by country or territory of origin.[35]

The following example may help in understanding the table below: the office of Australia received 1,614 PCT applications as a PCT receiving office in 2012 and 18,847 PCT national phase entries as designated office in 2011; whereas applicants residing in Australia filed a total of 1,708 PCT applications in 2012 and initiated 6,674 PCT national phase entries worldwide in 2011.

		PCT International Phase Filings in 2012		PCT National Phase Entries in 2011	
Name	Code	At Receiving Office	By Country of Origin	Office of Destination	By Country of Origin
Afghanistan	AF	n.a.	0	n.a.	3
Albania	AL	1	2	6	0
Algeria	DZ	4	4	766	2
Andorra	AD	n.a.	7	n.a.	23
Angola	AO	IB	0	--	3
Antigua and Barbuda	AG	0	0	--	6
Argentina	AR	n.a.	27	n.a.	104
Armenia	AM	7	8	10	7
Australia	AU	1,614	1,708	18,847	6,674
Austria	AT	538	1,323	185	4,159
Azerbaijan	AZ	3	4	9	1
Bahamas	BS	n.a.	13	n.a.	73
Bahrain	BH	0	2	136	0
Bangladesh	BD	n.a.	3	n.a.	1
Barbados	BB	IB	167	71	305
Belarus	BY	6	13	102	6
Belgium	BE	53	1,231	EP	5,122
Belize	BZ	0	2	--	0
Bermuda	BM	n.a.	n.a.	n.a.	62
Bhutan	BT	n.a.	0	n.a.	1
Bolivia (Plurinational State of)	BO	n.a.	0	n.a.	2
Bosnia and Herzegovina	BA	9	9	9	2
Brazil	BR	564	587	21,004	1,166
Brunei Darussalam	BN	2	3	--	2
Bulgaria	BG	29	31	8	36
Burkina Faso	BF	OA	0	OA	1
Cambodia	KH	n.a.	0	n.a.	1
Canada	CA	2,121	2,748	26,759	8,559
Chad	TD	OA	0	OA	37
Chile	CL	78	118	2,199	239
China	CN	19,930	18,627	64,486	12,901
China, Hong Kong SAR	HK	n.a.	n.a.	n.a.	217
China, Macao SAR	MO	n.a.	n.a.	n.a.	3
Colombia	CO	4	73	1,701	144
Cook Islands	CK	n.a.	n.a.	n.a.	1
Costa Rica	CR	4	5	619	7
Côte d'Ivoire	CI	OA	1	OA	0
Croatia	HR	26	30	10	33

35 A PCT applicant seeking protection in any of the European Patent Convention (EPC) member states can generally choose to enter the national phase at the relevant national office or at the EPO (see EPC member states indicated in the PCT Contracting States table in the Annex). This explains why the number of PCT national phase entries at some European national offices is lower than would otherwise be expected. The PCT national phase route is closed for France, Italy, the Netherlands and several other countries (again, see the PCT Contracting States table in the Annex). A PCT applicant seeking protection in those countries must enter the PCT national phase at the regional office (the EPO).

Name	Code	PCT International Phase Filings in 2012		PCT National Phase Entries in 2011	
		At Receiving Office	By Country of Origin	Office of Destination	By Country of Origin
Cuba	CU	9	9	183	90
Cyprus	CY	2	46	EP	104
Czech Republic	CZ	140	164	44	350
Democratic People's Republic of Korea	KP	3	3	--	7
Denmark	DK	649	1,424	48	5,255
Dominica	DM	0	0	--	1
Dominican Republic	DO	2	4	--	3
Ecuador	EC	11	45	--	6
Egypt	EG	36	41	1,537	42
El Salvador	SV	0	0	--	5
Estonia	EE	6	34	5	62
Eurasian Patent Organization	EA	15	n.a.	2,895	n.a.
European Patent Office	EP	32,593	n.a.	80,275	n.a.
Finland	FI	1,364	2,353	--	5,087
France	FR	3,240	7,739	EP	27,980
Gabon	GA	OA	3	OA	0
Georgia	GE	3	4	245	5
Germany	DE	1,417	18,855	2,946	57,769
Greece	GR	54	95	EP	216
Grenada	GD	0	0	--	1
Guatemala	GT	0	1	318	0
Guinea	GN	OA	0	OA	1
Honduras	HN	0	0	236	2
Hungary	HU	141	157	5	558
Iceland	IS	24	44	15	152
India	IN	676	1,208	28,456	2,946
Indonesia	ID	8	12	4,847	42
International Bureau	IB	9,711	n.a.	n.a.	n.a.
Iran (Islamic Republic of)	IR	n.a.	2	n.a.	8
Ireland	IE	53	392	EP	1,385
Israel	IL	973	1,377	5,525	4,966
Italy	IT	369	2,836	EP	8,837
Jamaica	JM	n.a.	1	n.a.	0
Japan	JP	42,787	43,660	51,519	96,069
Jordan	JO	n.a.	2	n.a.	5
Kazakhstan	KZ	11	9	132	8
Kenya	KE	2	5	--	14
Kuwait	KW	n.a.	0	n.a.	6
Kyrgyzstan	KG	1	4	--	1
Lao People's Democratic Republic	LA	IB	9	--	0
Latvia	LV	22	36	EP	55
Lebanon	LB	n.a.	6	n.a.	29
Liberia	LR	0	1	--	0
Liechtenstein	LI	CH	102	CH	213
Lithuania	LT	10	30	5	15
Luxembourg	LU	0	270	4	1,142
Madagascar	MG	IB	0	52	0
Malaysia	MY	296	292	4,687	486
Malta	MT	0	18	EP	151
Marshall Islands	MH	n.a.	1	n.a.	0
Mauritius	MU	n.a.	5	n.a.	11
Mexico	MX	138	190	11,000	565
Monaco	MC	0	15	EP	44
Mongolia	MN	0	0	--	13
Montenegro	ME	IB	0	82	0
Morocco	MA	27	31	857	16
Namibia	NA	AP	12	--	9

Name	Code	PCT International Phase Filings in 2012		PCT National Phase Entries in 2011	
		At Receiving Office	By Country of Origin	Office of Destination	By Country of Origin
Nepal	NP	n.a.	0	n.a.	1
Netherlands	NL	940	3,992	EP	17,124
Netherlands Antilles	AN	n.a.	n.a.	n.a.	19
New Zealand	NZ	216	282	4,045	1,088
Nicaragua	NI	0	2	--	0
Niger	NE	OA	2	OA	2
Nigeria	NG	IB	11	--	2
Norway	NO	327	683	509	2,519
Pakistan	PK	n.a.	2	n.a.	3
Panama	PA	0	16	--	38
Paraguay	PY	n.a.	0	n.a.	21
Peru	PE	11	11	1,002	26
Philippines	PH	13	16	--	22
Poland	PL	171	254	54	324
Portugal	PT	54	131	13	248
Qatar	QA	0	53	--	1
Republic of Korea	KR	11,869	11,848	31,039	14,210
Republic of Moldova	MD	3	3	7	0
Romania	RO	13	17	15	42
Russian Federation	RU	942	956	12,287	933
Saint Kitts and Nevis	KN	0	1	--	0
Saint Vincent and the Grenadines	VC	IB	1	--	7
Samoa	WS	n.a.	1	n.a.	5
San Marino	SM	0	7	--	16
Saudi Arabia	SA	n.a.	294	n.a.	240
Senegal	SN	OA	1	OA	1
Serbia	RS	17	20	21	24
Seychelles	SC	0	9	--	41
Sierra Leone	SL	AP	0	--	2
Singapore	SG	497	710	6,726	1,949
Slovakia	SK	28	43	18	110
Slovenia	SI	67	116	EP	295
South Africa	ZA	77	302	6,140	984
Spain	ES	1,210	1,687	98	3,697
Sri Lanka	LK	IB	14	--	6
Swaziland	SZ	AP	0	AP	6
Sweden	SE	1,721	3,585	53	11,611
Switzerland	CH	283	4,194	53	17,936
Syrian Arab Republic	SY	1	4	--	0
T F Y R of Macedonia	MK	2	2	--	0
Thailand	TH	45	60	2,150	72
Trinidad and Tobago	TT	1	1	--	6
Tunisia	TN	4	5	--	2
Turkey	TR	155	451	157	594
Ukraine	UA	111	109	2,321	86
United Arab Emirates	AE	IB	52	--	52
United Kingdom	GB	4,149	4,895	1,937	19,750
United Republic of Tanzania	TZ	AP	0	--	2
United States of America	US	51,677	51,207	97,561	144,466
Uruguay	UY	n.a.	8	n.a.	12
Uzbekistan	UZ	2	1	257	0
Vanuatu	VU	n.a.	0	n.a.	1
Venezuela (Bolivarian Republic of)	VE	n.a.	7	n.a.	4
Viet Nam	VN	8	13	2,945	15
Yemen	YE	n.a.	1	n.a.	0
Zambia	ZM	0	0	--	1

Name	Code	PCT International Phase Filings in 2012		PCT National Phase Entries in 2011	
		At Receiving Office	By Country of Origin	Office of Destination	By Country of Origin
Unknown		n.a.	27	5,147	14,149
Total		**194,400**	**194,400**	**507,400**	**507,400**

-- unknown data;

n.a. not applicable;

AP (African Regional Intellectual Property Organization), CH (Switzerland), EP (European Patent Office), IB (International Bureau) and OA (African Intellectual Property Organization) are the competent - designated, elected or receiving - office for certain member states;

PCT national phase entries by origin, world totals, and PCT application data are WIPO estimates; and

Offices of destination are designated and/or elected offices.

Source: WIPO Statistics Database, March 2013

LIST OF ACRONYMS

EPC	European Patent Convention
EPO	European Patent Office
IB	International Bureau
IP	Intellectual Property
IPC	International Patent Classification
IPE	International Preliminary Examination
IPEA	International Preliminary Examining Authority
IPRP	International Preliminary Report on Patentability
ISA	International Searching Authority
ISR	International Search Report
JPO	Japan Patent Office
NPE	PCT National Phase Entry
KIPO	Korean Intellectual Property Office
PCT	Patent Cooperation Treaty
PCT-PPH	Patent Cooperation Treaty - Patent Prosecution Highway
RO	Receiving Office
SAFE	Secure Application Filed Electronically
SIPO	State Intellectual Property Office of the People's Republic of China
SIS	Supplementary International Search
SISA	Authority specified for Supplementary Search (Supplementary International Searching Authority)
SISR	Supplementary International Search Report
USPTO	United States Patent and Trademark Office
WIPO	World Intellectual Property Organization

GLOSSARY

Applicant: An individual or legal entity that files a patent application. There may be more than one applicant in an application. For PCT statistics, the first-named applicant is used to determine the owner of a PCT application.

Application: A set of legal documents submitted to a patent office requesting that a patent be granted for the applicant's invention. The patent office examines the application and decides whether to grant a patent or reject the application.

Authority specified for Supplementary International Search (SISA): An International Searching Authority (ISA) that provides a Supplementary International Search service – also known as Supplementary International Searching Authority (SISA).

Chapter I of the PCT: The provisions in the PCT that regulate the filing of PCT applications, the establishment of international searches and written opinions by ISAs, and the international publication of PCT applications, and that provide for the communication of PCT applications and related documents to designated offices.

Chapter II of the PCT: The provisions in the PCT that regulate the optional international preliminary examination procedure.

Country of Origin: For statistical purposes, the country of origin of a PCT application is the country of residence (or nationality, in the absence of a valid residence) of the first-named applicant in the application.

Designated Office (DO): A national or regional office of or acting for a state designated in a PCT application under Chapter I of the PCT.

Designated State: A contracting state in which protection for the invention is sought, as specified in the PCT application.

Elected Office: The national or regional office of or acting for a state elected by the applicant under Chapter II of the PCT, at which the applicant intends to use the results of the international preliminary examination.

Filing Abroad: For statistical purposes, a patent application filed by a resident of a given country with a patent office of a foreign country. For example, a patent application filed with the USPTO by an applicant residing in France is considered a "filing abroad" from the perspective of France. A "filing abroad" is the opposite of a "non-resident filing", which describes a patent application by a resident of a foreign country from the perspective of the country receiving the application.

International Authority: A national or regional patent office or international organization that fulfills specific tasks, as prescribed by the PCT.

International Bureau (IB): In the context of the PCT, the IB of WIPO acts as a receiving office for PCT applications from all contracting states. It also handles certain processing tasks with respect to all PCT applications filed with all receiving offices worldwide.

International Filing Date: The date on which the receiving office receives a PCT application (provided certain formality requirements have been met).

International Patent Classification (IPC): An internationally recognized patent classification system, the IPC has a hierarchical structure of language-independent symbols and is divided into sections, classes, subclasses and groups. IPC symbols are assigned according to the technical features in patent applications. A patent application that relates to multiple technical features can be assigned several different IPC symbols.

International phase of the PCT: The international phase consists of five main stages:

1. the filing of a PCT application by the applicant and its processing by the receiving office;

2. the establishment of an ISR and a written opinion by an ISA;
3. the publication of the PCT application and related documents, as well as their communication to designated and elected offices by the IB;
4. the optional establishment of an SISR by a SISA; and
5. the optional establishment of an IPRP by an IPEA.

International Preliminary Examining Authority (IPEA): A national or regional patent office appointed by the PCT Assembly to carry out international preliminary examination. Its task is to establish the IPRP (Chapter II of the PCT).

International Preliminary Report on Patentability (Chapter II of the PCT) (IPRP): A preliminary, non-binding opinion, established by an IPEA at the request of the applicant, on whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious) and to be industrially applicable. Prior to January 1, 2004, this report was known as the "International Preliminary Examination Report".

International Search Report (ISR): A report established by an ISA containing citations of documents (prior art) considered to be relevant for determining, in particular, the novelty and inventive step of the invention as claimed. The ISR also includes the classification of the subject matter of the invention and an indication of the fields searched as well as any electronic databases searched.

International Searching Authority (ISA): A national patent office or intergovernmental organization appointed by the PCT Assembly to carry out international searches. ISAs establish ISRs and written opinions on PCT applications.

Invention: A new solution to a technical problem. To obtain patent rights an invention must be novel, involve an inventive step and be industrially applicable, as judged by a person skilled in the art.

National Phase Entry (NPE): The entry of a PCT application into the national phase before a national or regional patent office. National phase entry involves the payment of fees and, where necessary, the submission of a translation of the PCT application. It must take place within 30 months from the priority date of the application, although longer time periods are allowed by some offices.

National Phase under the PCT: Following the PCT international phase, the national phase consists of the processing of the application before each national or regional patent office in which the applicant seeks protection for an invention.

Non-Resident Filing: For statistical purposes, a patent application filed with a national patent office by an applicant from a foreign country. For example, a patent application filed with the USPTO by an applicant residing in France is considered a non-resident filing from the perspective of the US. A "non-resident filing" is the opposite of a "filing abroad", which describes a patent application filed by the resident of a given country with a foreign patent office from the perspective of the applicant's origin. A "non-resident filing" is also known as a "foreign filing".

Paris Convention: An international convention (the Paris Convention for the Protection of Industrial Property) signed in Paris, France, on March 20, 1883, it is one of the first and most important intellectual property (IP) treaties. The Paris Convention establishes, among other things, the "right of priority" principle, which enables a patent applicant to claim a priority of up to 12 months when filing an application in countries other than the original country of filing.

Patent: An exclusive right granted by law to an applicant for an invention for a limited period of time (generally 20 years from the time of filing). The patent holder has the exclusive right to commercially exploit the invention for the duration of the patent term. In return, the applicant is obliged to disclose the invention to the public in a man-

ner that enables others skilled in the art to replicate it. The patent system is designed to balance the interests of applicants (exclusive rights) with the interests of society (disclosure of the invention). Patents are granted by national or regional patent offices and are limited to the jurisdiction of the issuing authority. Patent rights can be obtained by filing an application with the relevant national or regional office(s), or by filing a PCT application.

Patent Cooperation Treaty (PCT): An international treaty administered by WIPO, the PCT allows applicants to seek patent protection for an invention simultaneously in a large number of countries (contracting states) by filing a single "PCT international application". The decision whether to grant patent rights remains the prerogative of national and regional patent offices.

PATENTSCOPE Search Service: This service provides access, free of charge, to all published PCT applications along with their related documents, and to the national or regional patent collections from numerous offices worldwide. Since April 2006, the PATENTSCOPE search service has become the authentic publication source of PCT applications. Powerful, flexible search interfaces allow retrieval of relevant PCT applications and associated information.

PCT Application: A patent application filed through the WIPO-administered PCT, also known as a PCT international application.

PCT-Patent Prosecution Highway Pilots (PCT-PPH): A number of bilateral agreements signed between patent offices enable applicants to request a fast-track examination procedure whereby patent examiners can make use of the work products of another office or offices. These work products can include the results of a favorable written opinion by an ISA, the written opinion of an IPEA or the IPRP issued within the framework of the PCT. By requesting this procedure, applicants can generally obtain patents more quickly from participating offices.

Prior Art: All information disclosed to the public in any form about an invention before a given date. Information on the prior art can assist in determining whether the claimed invention is new and involves an inventive step (is not obvious) for the purposes of international searches and international preliminary examination.

Priority Date: The filing date of the application on the basis of which priority is claimed.

Publication of PCT Application: The IB publishes the PCT application and related documents promptly after the expiration of 18 months from the priority date. If the PCT application is withdrawn or considered withdrawn, the application is not published. An applicant can request early publication of a PCT application.

Receiving Office (RO): A patent office – or the IB – with which the PCT application is filed. The role of the RO is to check and process the application in accordance with the PCT and its regulations.

Resident Filing: For statistical purposes, an application filed with a patent office by an applicant having residence in the same country. For example, a patent application filed at the JPO by a resident of Japan is considered a resident filing for that office. A "resident filing" is also known as a "domestic filing".

Supplementary International Searching Authority (SISA): See "Authority specified for Supplementary International Search".

Supplementary International Search Report (SISR): A report, similar to the ISR, established during the Supplementary International Search, that allows the applicant to request, in addition to the main international search, one or more supplementary international searches, each to be carried out by an international authority other than the ISA that carries out the main international search. The SIS primarily focuses on the patent documentation in the language in which the SISA specializes.

World Intellectual Property Organization (WIPO): A specialized agency of the United Nations, WIPO is dedicated to developing a balanced and effective international IP system, that rewards creativity, stimulates innovation and contributes to economic development while safeguarding the public interest. WIPO was established in 1967 with a mandate from its member states to promote the protection of IP throughout the world through cooperation among states and in collaboration with other international organizations.

Written Opinion of the ISA: For every PCT application filed on or after January 1, 2004, an ISA establishes, at the same time that it establishes the ISR, a preliminary and non-binding written opinion on whether the claimed invention appears to be novel, to involve an inventive step and to be industrially applicable.

PCT CONTRACTING STATES

During 2012, two new countries acceded to the PCT, namely Brunei Darussalam (effective July 24) and Panama (effective September 7), bringing the total number to 146.

AE United Arab Emirates
AG Antigua and Barbuda
AL Albania (EP)[1, 2]
AM Armenia (EA)
AO Angola
AT Austria (EP)
AU Australia
AZ Azerbaijan (EA)
BA Bosnia and Herzegovina[2]
BB Barbados
BE Belgium (EP)[3]
BF Burkina Faso (OA)[3]
BG Bulgaria (EP)
BH Bahrain
BJ Benin (OA)[3]
BN Brunei Darussalam
BR Brazil
BW Botswana (AP)
BY Belarus (EA)
BZ Belize
CA Canada
CF Central African Republic (OA)[3]
CG Congo (OA)[3]
CH Switzerland (EP)
CI Côte d'Ivoire (OA)[3]
CL Chile
CM Cameroon (OA)[3]
CN China
CO Colombia
CR Costa Rica
CU Cuba
CY Cyprus (EP)[3]
CZ Czech Republic (EP)
DE Germany (EP)
DK Denmark (EP)
DM Dominica
DO Dominican Republic
DZ Algeria
EC Ecuador
EE Estonia (EP)
EG Egypt
ES Spain (EP)
FI Finland (EP)
FR France (EP)[3]
GA Gabon (OA)[3]
GB United Kingdom (EP)
GD Grenada
GE Georgia
GH Ghana (AP)
GM Gambia (AP)
GN Guinea (OA)[3]
GQ Equatorial Guinea (OA)[3]
GR Greece (EP)[3]
GT Guatemala
GW Guinea-Bissau (OA)[3]
HN Honduras
HR Croatia (EP)
HU Hungary (EP)
ID Indonesia
IE Ireland (EP)[3]
IL Israel
IN India
IS Iceland (EP)
IT Italy (EP)[3]
JP Japan
KE Kenya (AP)
KG Kyrgyzstan (EA)
KM Comoros
KN Saint Kitts and Nevis
KP Democratic People's Republic of Korea
KR Republic of Korea
KZ Kazakhstan (EA)
LA Lao People's Democratic Republic
LC Saint Lucia
LI Liechtenstein (EP)
LK Sri Lanka
LR Liberia (AP)[4]
LS Lesotho (AP)
LT Lithuania (EP)
LU Luxembourg (EP)
LV Latvia (EP)[3]
LY Libya
MA Morocco
MC Monaco (EP)[3]
MD Republic of Moldova[5]
ME Montenegro[2]
MG Madagascar
MK The former Yugoslav Republic of Macedonia (EP)
ML Mali (OA)[3]
MN Mongolia
MR Mauritania (OA)[3]
MT Malta (EP)[3]
MW Malawi (AP)
MX Mexico
MY Malaysia
MZ Mozambique (AP)
NA Namibia (AP)
NE Niger (OA)[3]
NG Nigeria
NI Nicaragua
NL Netherlands (EP)[3]
NO Norway (EP)
NZ New Zealand
OM Oman
PA Panama
PE Peru
PG Papua New Guinea
PH Philippines
PL Poland (EP)
PT Portugal (EP)
QA Qatar
RO Romania (EP)
RS Serbia (EP)[2, 6]
RU Russian Federation (EA)
RW Rwanda (AP)[7]
SC Seychelles
SD Sudan (AP)
SE Sweden (EP)
SG Singapore
SI Slovenia (EP)[3]
SK Slovakia (EP)
SL Sierra Leone (AP)
SM San Marino (EP)
SN Senegal (OA)[3]
ST Sao Tome and Principe
SV El Salvador
SY Syrian Arab Republic
SZ Swaziland (AP)[3]
TD Chad (OA)[3]
TG Togo (OA)[3]
TH Thailand
TJ Tajikistan (EA)
TM Turkmenistan (EA)
TN Tunisia
TR Turkey (EP)
TT Trinidad and Tobago
TZ United Republic of Tanzania (AP)
UA Ukraine
UG Uganda (AP)
US United States of America
UZ Uzbekistan
VC Saint Vincent and the Grenadines
VN Viet Nam
ZA South Africa
ZM Zambia (AP)
ZW Zimbabwe (AP)

1 Only PCT applications filed on or after May 1, 2010, include the designation of this state for a European patent.
2 Extension of European patent possible; in the case of Albania and Serbia, only for PCT applications filed before May 1, 2010, and October 1, 2010, respectively.
3 May only be designated for a regional patent (the "national route" via the PCT has been closed).
4 Only PCT applications filed on or after March 24, 2010, include the designation of this state for an ARIPO patent.
5 PCT applications filed before April 26, 2012, include the designation of this state for a Eurasian patent.
6 Only PCT applications filed on or after October 1, 2010, include the designation of this state for a European patent.
7 Only PCT applications filed on or after September 24, 2011, include the designation of this state for an ARIPO patent

Where a state can be designated for a regional patent, the two-letter code for the regional patent concerned is indicated in parentheses (AP = ARIPO patent, EA = Eurasian patent, EP = European patent, OA = OAPI patent).

Source: PCT Newsletter, December 2012

ADDITIONAL RESOURCES

The following patent resources are available on the WIPO website:

PATENTSCOPE
WIPO's gateway to patent services and activities, such as the PATENTSCOPE Search Service, enabling search and download of PCT applications or national and regional patent collections.
www.wipo.int/patentscope/

ePCT for Applicants and Third Parties
WIPO's online service that provides secure electronic access to the files of PCT applications as maintained by the IB.
https://pct.wipo.int/LoginForms/epct.jsp

ePCT for Offices
WIPO's online services for receiving offices and International Searching and Preliminary Examining Authorities.
http://wipo.int/pct/en/epct/epct_office.html

PCT Resources
WIPO's gateway to PCT resources for the public, applicants and offices.
www.wipo.int/pct/

PCT Newsletter
PCT monthly magazine containing information about the filing of PCT applications and news about changes relating to the PCT.
www.wipo.int/pct/en/newslett/

PCT Statistics
Monthly, quarterly and yearly statistics on the PCT system, including a comparative list of applicants and details of the indicators included in this report.
www.wipo.int/ipstats/en/statistics/pct/

Law of Patents
Includes current and emerging issues related to patents, information on WIPO-administered treaties, access to national/regional patent laws, patent law harmonization.
www.wipo.int/patent/law/

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