PCT

Please note, this version of the PCT Yearly Review 2009, posted on June 07, 2010, updates and replaces the previous version

THE INTERNATIONAL PATENT SYSTEM
>> YEARLY REVIEW

Developments and Performance in **2009**

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ACKNOWLEDGEMENTS

The PCT Yearly Review was prepared under the general direction of Director General Francis Gurry and Deputy Director General Christian Wichard and supervised by Carsten Fink, Chief Economist. The principal contributors were Mosahid Khan, Ryan Lamb, Bruno Le Feuvre, and Hao Zhou. Other written contributions were provided by Debra Collier. Bruno Le Feuvre coordinated the production of the Review and Samiah Do Carmo Figueiredo provided valuable administrative support.

Colleagues in WIPO's Patent Sector offered valuable comments on drafts at various stages of preparation. Gratitude is also due to Heidi Hawkings for timely editorial support, Odile Conti for the Review's design and the Language Service for the French and Spanish translations.

Finally, WIPO is grateful to national and regional patent offices for sharing their annual statistics.

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HIGHLIGHTS

In 2009, the international patent system saw several notable developments.

Decrease in PCT Applications in 2009 amid Global Economic Downturn – For the first time, the PCT System experienced a decline in filings compared with the previous year. In 2009, around 155,900 PCT applications were filed, compared to nearly 164,000 in 2008.

Heterogeneity in Filing Trends among Countries – Countries such as Germany (-11.3%), Israel (-17.2%) and the United States of America (-10.8%) experienced sharper than average declines in PCT filings, while China (+29.1%), Japan (+3.6%) and the Republic of Korea (+1.9%) continued to see positive growth despite challenging global economic conditions. The United States of America maintained its top ranking followed by Japan, Germany, the Republic of Korea and China.

Changes in Top Applicants List – Panasonic Corporation (Japan) returned to the top spot in the list of PCT applicants, nudging Huawei Technologies, Co., Ltd. (China) into second place. Panasonic Corporation saw the publication of 1,891 PCT applications in 2009, Huawei Technologies Co. Ltd. 1,847, followed by Robert Bosch GMBH (Germany), with 1,586), Koninklijke Philips Electronics N.V. (Netherlands), with 1,295) and Qualcomm Incorporated (USA), with 1,280).

Strong Growth in Certain Technical Fields – The technical field with the highest growth rate over the previous year was micro-structural and nano-technology (+54 applications, 10.2% more than in 2008). Semiconductors (+691 applications, 10% more than in 2008) and digital communication (+265 applications, 2.6% more than in 2008) had the largest absolute increase in published PCT filings.

Korean and Portuguese as Languages of Publication – PCT applicants filing in Korean or Portuguese on or after January 1, 2009 no longer need to translate their applications for international publication. This brings the total number of publication languages to 10.

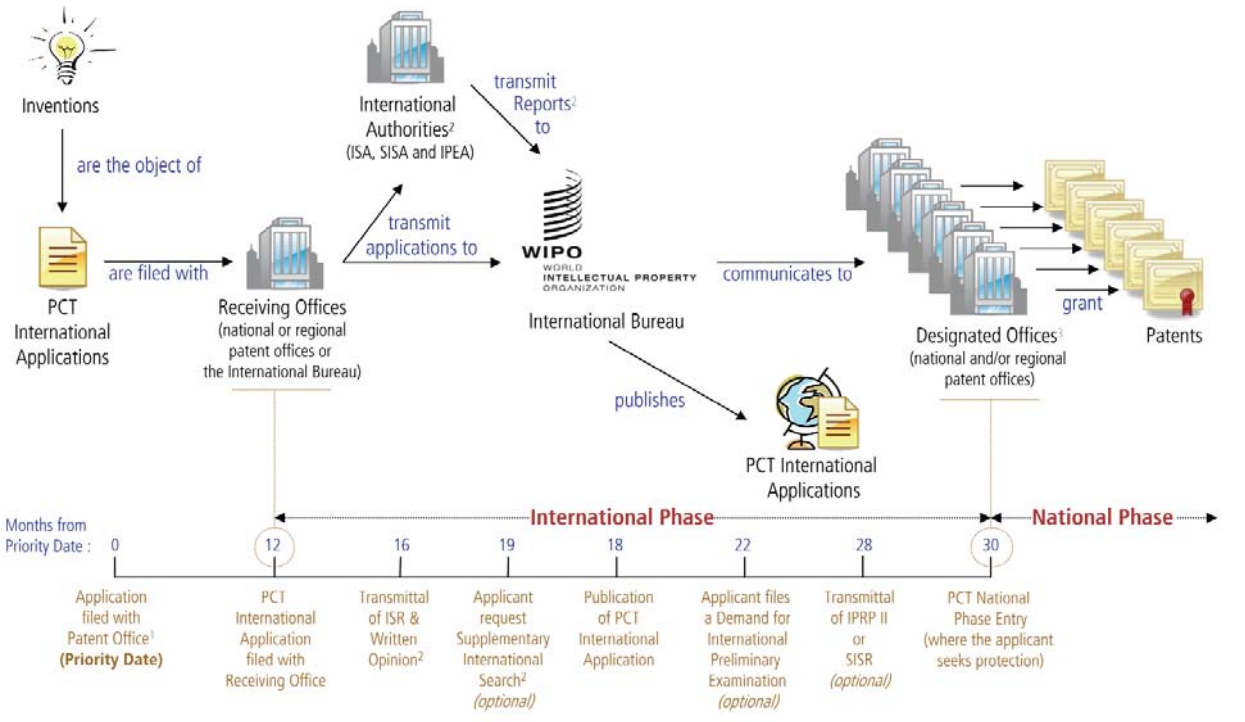
Supplementary International Search Service – Since January 1, 2009, the PCT Supplementary International Search service gives PCT applicants the option of requesting additional language-based searches during the international phase, in addition to the main International Search Report established by the applicant's International Searching Authority. This service is intended to provide a more complete overview of the prior art in the international phase.

INTRODUCTION TO THE PATENT COOPERATION TREATY

History

The Patent Cooperation Treaty (PCT) is an international treaty administered by the World Intellectual Property Organization (WIPO) and offers patent applicants an advantageous route for obtaining 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) for acquiring patent rights in different countries. Starting with only 18 Members, in 2009 there were 142 PCT Contracting States.

Overview of the PCT System



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

Source: World Intellectual Property Organization (WIPO)

> An applicant must file a PCT application at a Receiving Office and choose an International Searching Authority (ISA) that will provide an International Search Report (ISR) and a written opinion on the potential patentability of the invention. The International Bureau (IB) of WIPO publishes the application and communicates it, along with necessary supporting documents, to patent offices of countries (or regions) party to the PCT System. After receiving the ISR and written opinion, the applicant can choose to request a supplementary international search with Supplementary International Searching Authority (SISA) and/or to file a demand for international preliminary examination with an International Preliminary Examining Authority (IPEA). The applicant has, in general, 30 months from the priority date to enter the PCT national phase in countries or regions in which protection is sought.

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 – all by paying one set of fees. PCT applicants save time as work performed during international processing is generally not repeated by each national or regional office. In addition, 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 in which markets to seek patent protection.

Filing of PCT Applications

Generally, 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 a Receiving Office, i.e., the respective national or regional patent office or the IB, in a language accepted by the Receiving Office, thus beginning the "international phase". A patent application filed through the PCT System is a PCT international application, referred to hereafter as a PCT application. Only a national or a resident of a PCT Contracting State can file a PCT application. If several applicants are named in a PCT application, at least one of them must comply with this requirement.

Applicant can file a single, uniform international application in one language to seek patent protection in a large number of countries, thereby avoiding the need to file several separate applications, possibly in different languages, at each national or regional patent office. At the moment of filing, all Contracting States are automatically designated in the application, but the applicant ultimately decides in which national or regional offices to seek 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).

International Phase

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

International Bureau

The Receiving Office 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 on PATENTSCOPE®;
- communicating documents to offices and third parties;
- providing legal advice to users on request; and
- providing PCT-related assistance to PCT Member States.

International Search

PCT applications are subject to an international search by one of the 14 ISAs which, in turn, identify the prior art relevant to the patentability of the invention; draft (or "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 amend the application to improve the probability of obtaining a patent, or withdraw the application before incurring additional costs.

Supplementary International Search

As of January 1, 2009, the PCT Supplementary International Search (SIS) service offers applicants the option to request searches in additional languages, in addition to the searches performed by the ISA selected by the applicant. The service aims to provide a more complete overview of the prior art in the international phase. Applicants can request a Supplementary International Search Report (SISR) by an SISA up to 19 months from the priority date.

International Preliminary Examination

After receiving the ISA's written opinion, applicants can request that an optional international preliminary examination, a second evaluation of the invention's patentability, 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) will further assist the applicant in determining whether to enter the national phase.

National Phase

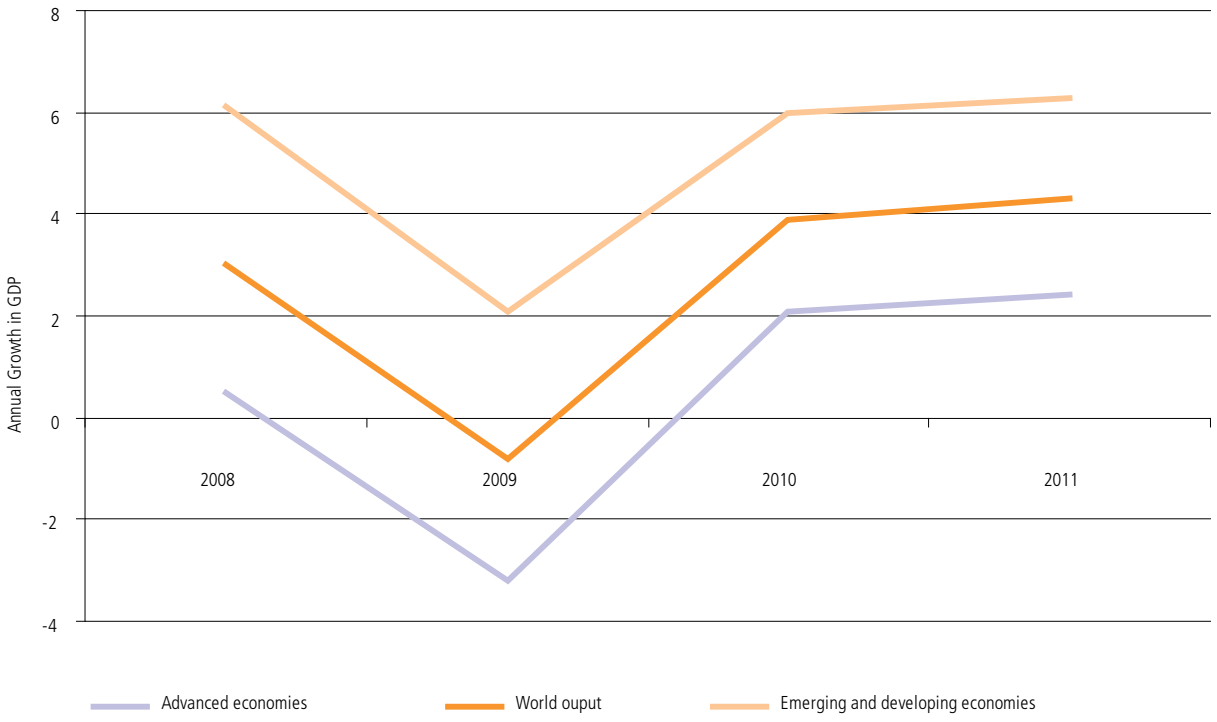
Under the PCT, applicants have at least 18 months from the date on which the PCT application was filed before entering the national phase at individual patent offices. This 18-month delay affords the applicant additional time – compared to that provided under the Paris Convention – to evaluate the chances of obtaining a patent and plan how to use the invention commercially in the countries where protection is sought. In the national phase, each patent office is responsible for examining the application in accordance with its national patent law and deciding whether or not 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: *http://www.wipo.int/pct/en/*

SPECIAL THEME: THE IMPACT OF THE FINANCIAL CRISIS ON PCT APPLICATIONS

The global financial crisis – which was triggered by a dramatic rise in mortgage delinquencies and foreclosures in the United States of America in 2007 and reached its highpoint with the collapse of Lehman Brothers and the subsequent bailouts of numerous national banking systems in 2008 – has resulted in the deepest economic downturn since the Great Depression of the 1930s. The International Monetary Fund (IMF) estimates global economic output to have shrunk by 0.8 percent in 2009, with advanced economies registering an even steeper decline in economic activity of 3.2 percent (see Figure I).

Figure 1. Growth of Gross Domestic Product (GDP), 2008-2011 (in percent)



Source: IMF World Economic Outlook
Note: Figures for 2010 and 2011 are projections.

There is little doubt that the financial and ensuing economic crisis was behind the 4.5 percent drop in worldwide PCT applications in 2009 – the first-ever year-on-year decline since the PCT became operational in 1978. However, the impact of the crisis has been uneven across countries. This section offers an overview of the main filing trends in 2009 in light of the difficult economic environment faced by companies around the world.

The impact of the crisis on patent filing behavior

Before taking a closer look at 2009 filing figures, it is instructive to identify the possible channels through which the financial crisis may have affected patenting behavior.

In principle, short-term movements in the business cycle should have only a limited effect on patent filing behavior, because research and development (R&D) and patenting decisions are based on expectations about medium to long-term market growth. However, the nature and depth of the crisis suggest at least two potentially significant short-run effects.

First, the sharp drop in demand and depreciation of asset values associated with the crisis has led to falling cash flows on company balance sheets. At the same time, financial market conditions toughened, weakening access to credit. As a result, many companies were forced to cut R&D investment and expenditure for the acquisition and maintenance of patents. Even firms with sufficient cash reserves and continued access to credit markets reportedly cut back in these areas as company-wide budget cuts associated with weaker sales had to be shared equally across company departments.[1]

Second, companies faced unprecedented uncertainty about the future growth prospects of the world economy. Indicators of economic uncertainty reached historical highs. Indeed, for several weeks the collapse of the world's financial system seemed a real possibility. As a consequence, companies were likely to have re-assessed medium to long-run returns on investment in R&D and the acquisition of patents, and adjusted related expenditures accordingly.

The timing of these effects has not been uniform. In most sectors, R&D activities span several years, making it unlikely that the onset of the crisis had an immediate effect on R&D output. The full impact of reduced R&D investment on patent filings may only be felt in 2010 and beyond. In contrast, reduced expenditure on acquiring intellectual property (IP) rights was arguably the main driving force behind the worldwide drop in PCT applications in 2009. However, it remains uncertain whether patents not filed in 2009 were permanently shelved or were put on hold to be filed later. These considerations will be of some importance in evaluating the filing outlook for 2010 and 2011.

Uneven patent filing response to the crisis across countries

There is significant heterogeneity behind the 4.5 percent drop in PCT applications in 2009. To a large extent, the year-on-year decrease reflects an 10.8 percent fall in PCT applications from the United States of America – the largest user of the PCT System, accounting for around 30 percent of total filings. The sharp fall in PCT applications from the US represents close to 80 percent of the worldwide drop. Interestingly, the fall in PCT applications is steeper than the year-on-year decrease in patent applications by US residents at the US Patent and Trademark Office (USPTO), which saw only a 4.4 percent drop in 2009 (see Figure II).[2]

PCT applications from Germany, the third largest user of the PCT System, saw a decline similar in magnitude to the US (-11.3 percent in 2009). As in the US case, resident filings at either the German Patent and Trademark Office or the EPO declined less sharply, by 3.0 percent. The two other major European users of the PCT system – France and the United Kingdom (UK) – experienced similarly modest drops at the national level (-2.3 percent for France and -3.5 percent for the UK). However, PCT applications in these two countries were comparatively less affected by the crisis compared to the US and Germany, showing a modest decline for the UK (-3.4 percent) and even a slight increase for France (1.3 percent).

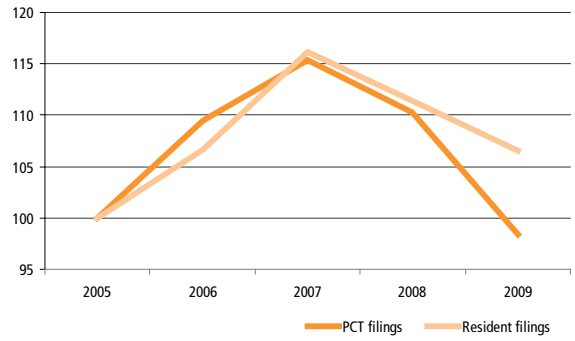
The experience of Japan, the second largest user of the PCT System, is similar to that of France: the number of PCT applications increased by 3.6 percent in 2009, while the number of resident filings at the JPO fell by 10.5 percent. This comparative performance reflects a longer term trend, whereby Japanese residents have cut back on their national filings at the JPO, but have steadily increased the number of PCT applications. If anything, the crisis may have sharpened the 2009 decline in national filings.

[1] Comprehensive data on R&D expenditure for 2009 are not yet available. However, the OECD Science, Technology and Industry Scoreboard 2009, based on preliminary US stock market data, reports that "companies have significantly reduced their R&D investments in the aftermath of the financial crisis."

[2] PCT applications and resident patent filings are strictly not comparable. However, they approximate overall filing activity within the PCT System and at national offices and it is therefore interesting to track their evolution over time.

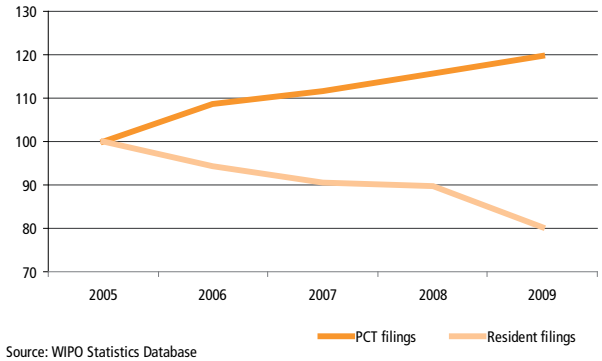
Figure 2. PCT application filings and resident filings at national patent offices (2005 = 100)

a. United States of America



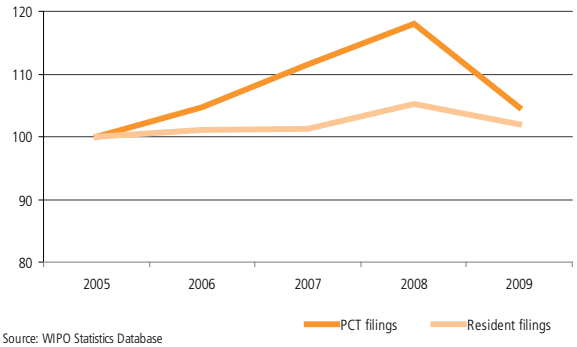
Source: WIPO Statistics Database

b. Japan



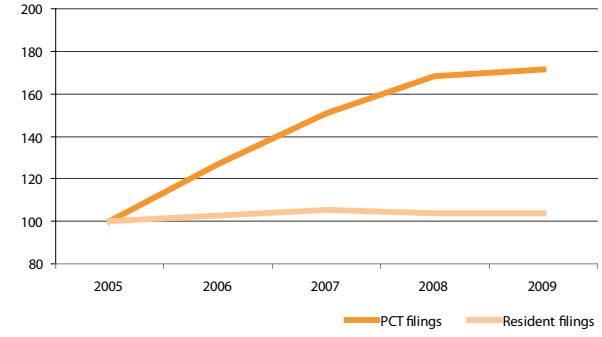
Source: WIPO Statistics Database

c. Germany



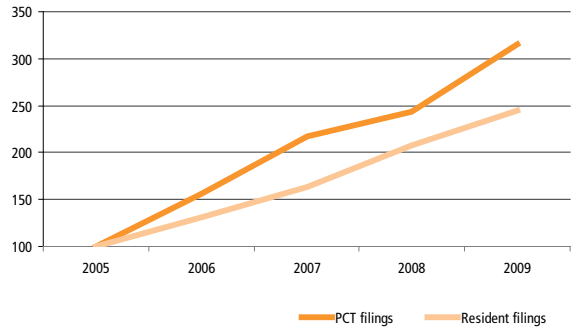
Source: WIPO Statistics Database

d. Republic of Korea



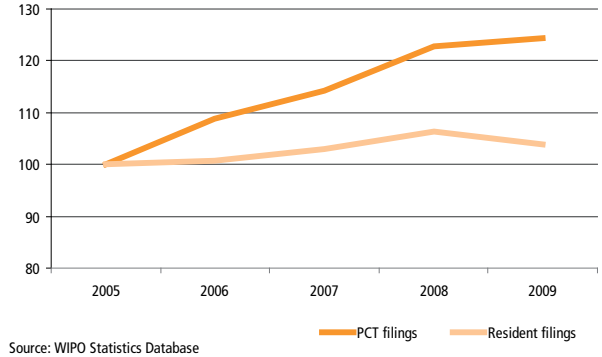
Source: WIPO Statistics Database

e. China



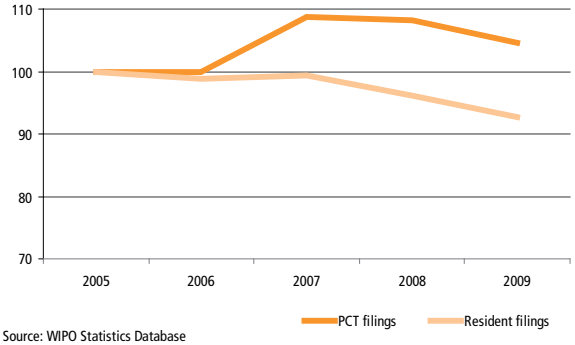
Source: WIPO Statistics Database

f. France



Source: WIPO Statistics Database

g. United Kingdom



Source: WIPO Statistics Database

Note: PCT applications and national patent filings are transformed into index values with a common base year of 2005. Filing figures for France, Germany, and the UK including applications at the respective national patent offices and at the EPO.

The two largest emerging economies users of the PCT System – China and the Republic of Korea – saw continued growth in filings. In the Republic of Korea, growth occurred despite a largely flat number of resident patent filings at the Korean Intellectual Property Office (KIPO). The growth rate of PCT applications declined, however, from more than 10 percent annually in 2008 and the two preceding years, to 1.9 percent in 2009, possibly reflecting weaker economic conditions.

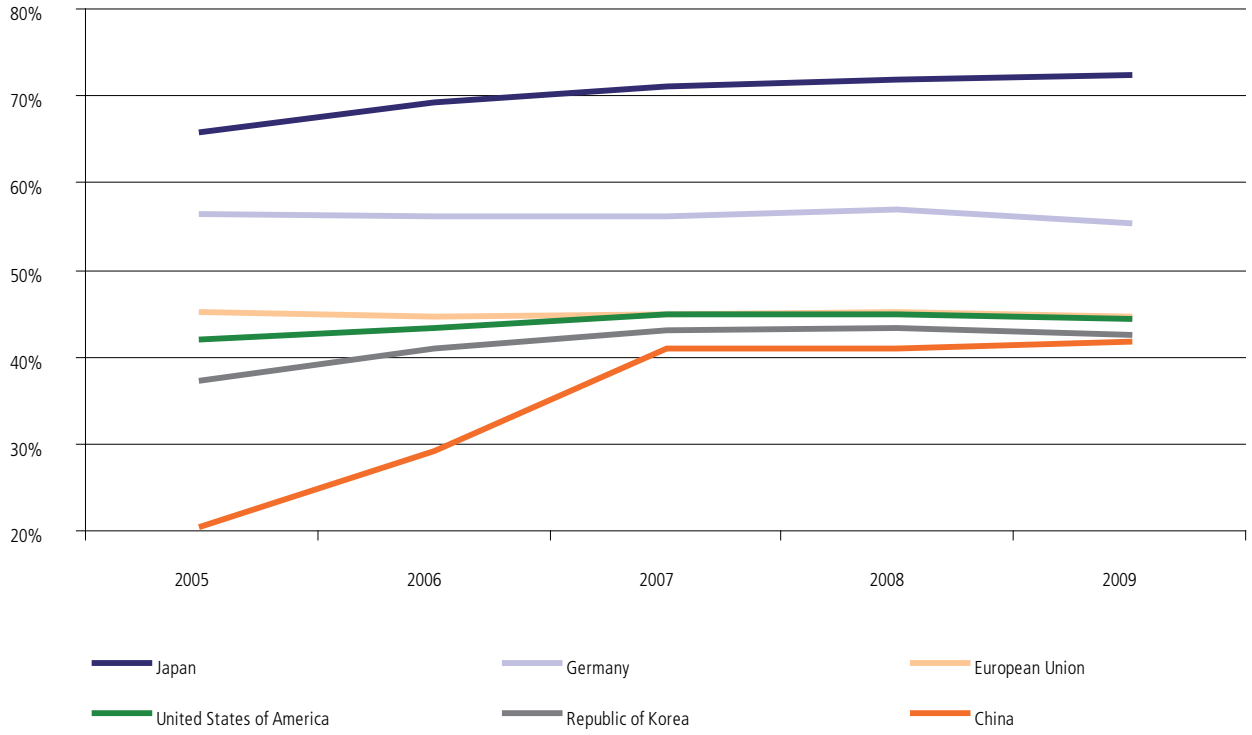
In China, PCT applications grew by 29.1 percent in 2009, outpacing the 17.8 percent growth rate in filings by domestic residents at the State Intellectual Property Office of the People's Republic of China (SIPO). Growth in PCT applications from China actually accelerated in 2009 vis-à-vis 2008, appearing to be unaffected by the global economic turmoil.

Except for the US and Germany, PCT applications in 2009 from the major filing countries have grown more strongly or fallen by less than resident filings at domestic (or regional) IP offices (see Figure II). Two explanations may account for this outcome. First, PCT applications are, on average, more valuable than resident patent filings, as reflected in the desire of applicants to seek patent protection in more than one jurisdiction. Even though companies faced cutbacks as a result of the financial crisis in 2009, they may have opted to continue filing PCT applications to protect their most promising inventions. Second, by filing PCT applications, companies gain additional time before entering the procedures at national or regional patent offices (see "Introduction to the PCT"). In times of economic uncertainty and budgetary tightening, the option of deferring the assessment of the commercial potential of inventions and the decision in which markets to seek protection is especially valuable.

It is interesting to ask to what extent the crisis has affected larger companies versus smaller companies or individual applicants differently. If curtailed access to financial markets has led companies to cut expenditure on acquiring IP rights, one would expect larger applicants, likely to have better access to credit markets, to be less affected. However, the data do not bear out such a differential effect. Figure III depicts, for the largest filing countries, the share of PCT applications published for entities having had more than 100 PCT applications published in 2005-2009.[3] No discernable trends are visible for 2008 and 2009. In other words, even though the economic downturn appears to have caused companies to file fewer PCT applications – at least in certain jurisdictions and especially in the US – small and large filers appear to have cut back by proportionally similar magnitudes.

[3] Applying thresholds of 500 or 50 PCT published applications led to the same qualitative conclusions.

Figure 3. Top Applicants' Share of published PCT Applications, 2005-2009

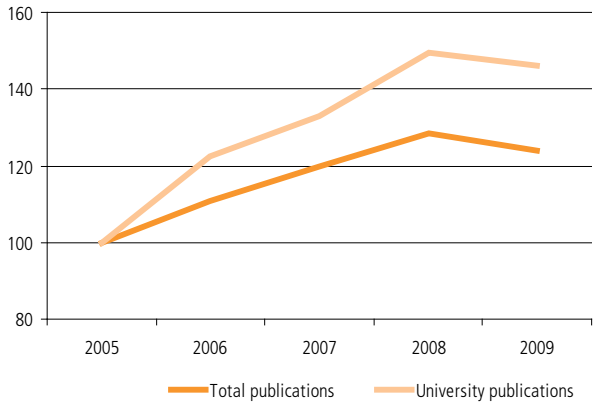


Source: WIPO Statistics Database

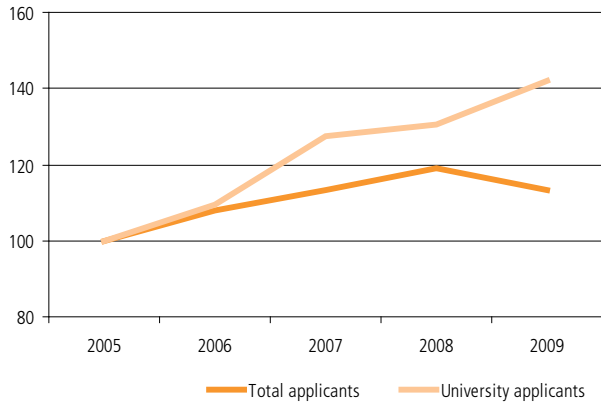
Note: Top applicants are defined as entities having had more than 100 PCT applications published in 2005-2009.

Finally, it is interesting to analyze PCT applications by universities in light of the crisis. The conditions for financing the acquisition of IP rights are likely to differ between universities and companies. Figure IV shows that PCT publications from universities have grown considerably faster in recent years, but like total PCT publications experienced a decline in 2009. Interestingly, however, the number of university applicants continued to grow in 2009, despite a drop in the overall number of applicants. Among the top 20 filing countries, France (48.6 percent), Spain (46.7 percent), and China (32.7 percent) accounted for the largest percentage increases in the number of university applicants.

Figure 4. PCT applications from universities and university applicants, (2005=100)



Source: WIPO Statistics Database



Source: WIPO Statistics Database

Outlook

While the current economic downturn associated with the financial crisis is the deepest since the 1930s, today's institutional environment for the acquisition of IP rights looks very different from that of some 80 years ago. It is therefore difficult to forecast with confidence how PCT applications will evolve in 2010 and beyond.

However, three observations can be made:

- Looking at the latest economic data, there are grounds for optimism. Most major economies have emerged from recession. Expansionary monetary policies and fiscal stimulus programs around the world have avoided a 1930s-like economic downward spiral. The IMF predicts global economic output to grow by 3.9 percent in 2010 and by 4.3 percent in 2011 (see Figure I). This turnaround notwithstanding, financial markets in many parts of the world have not yet fully recovered, and private demand continues to be subdued. Full crisis recovery will take its time.

- The crisis is likely to have a lingering impact on filing behavior in 2010 and 2011. The full effect of reduced R&D investment on filings may only emerge after considerable time. Moreover, some companies may have decided to postpone filing patent applications for certain inventions during the height of the crisis. Reduced uncertainty and the restoration of economic growth may lead companies to file those applications in 2010 and 2011.

- The post-crisis world economy is likely to see faster rates of economic growth in emerging markets – especially East Asia – compared to developed countries. Accordingly, innovative companies will continue to broaden the geographical coverage of their patent portfolios. By facilitating the process of obtaining patents for the same invention in several jurisdictions, the PCT system is well-placed to support the broader international outlook of innovators around the world.

SECTION A – USE OF THE PCT SYSTEM

1. INTERNATIONAL PHASE: FILING OF PCT APPLICATIONS

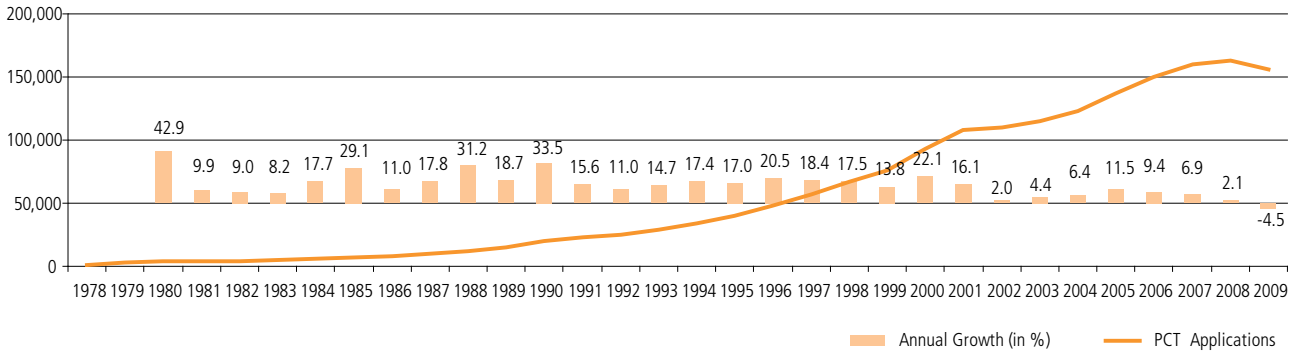
This section presents the key statistical trends and patterns for the international phase. It briefly describes the global trend, analyzes PCT applications by country of origin of the applicant, then presents the ranking of top applicants and a breakdown of applications by field of technology.

Global Trend

1.1 Trends in PCT Applications

Figure 1.1 depicts the number of PCT applications filed since 1978 and annual growth rates. The underlying data are based on the international filing date of the PCT applications.

Figure 1.1. Trends in PCT Applications, 1978 - 2009



Source: WIPO Statistics Database

> In 2009, an estimated 155,900 PCT applications were filed worldwide, representing a 4.5% decrease compared to 2008. For the first time, the PCT System witnessed a decline over the previous year. This can be explained largely by the negative impact, for many countries, of the global economic downturn on international patenting activity (see Table 1.2 below).

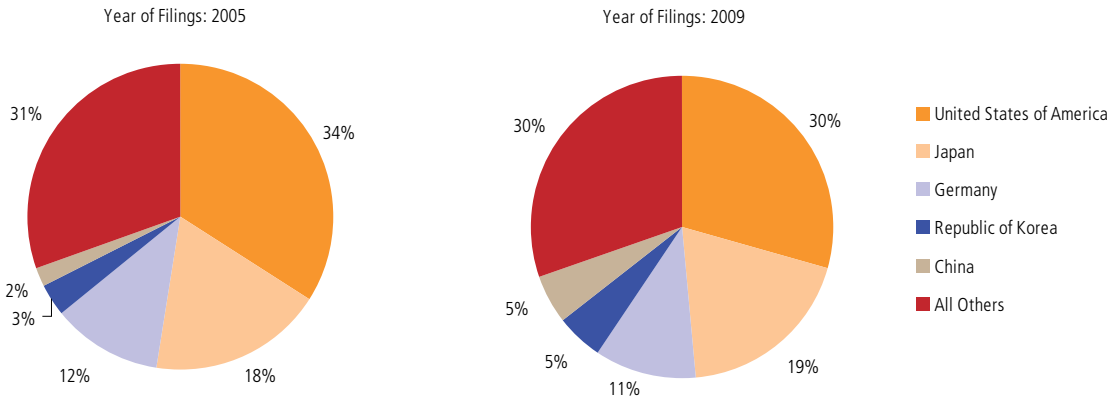
Applications by Country of Origin

The criterion for allocating PCT applications to a particular country is the residency of the first-named applicant in the PCT application. A statistical table containing all countries is available in the annex.

1.2 Top Countries of Origin: PCT applications

Figure 1.2 shows the distribution of PCT applications in the international phase by country of origin focusing on the top 5 filing countries.

Figure 1.2. Distribution of PCT applications by country of origin, 2005 and 2009



Source: WIPO Statistics Database

> Applicants from the US filed the largest share (30%) of PCT applications in 2009, followed by applicants from Japan and Germany. The combined share of the top 5 countries has remained the same, around 70%, between 2005 and 2009. However, US and German shares of total PCT applications in 2009 decreased by 4 and 1 percentage points, respectively; whereas, China, the Republic of Korea and Japan each saw their shares of PCT applications increase by 3, 2 and 1 percentage points, respectively.

Table 1.2 shows the number of PCT applications filed by the top 15 countries of origin from 2005 to 2009.

Table 1.2. PCT Applications by Country of Origin, 2005 - 2009

Country of Origin	Year of Filing					2009 Share (%)	Changed compared to 2008 (%)
	2005	2006	2007	2008	2009		
United States of America	46,858	51,296	54,044	51,673	46,079	29.6	-10.8
Japan	24,870	27,023	27,749	28,785	29,807	19.1	3.6
Germany	15,987	16,734	17,825	18,854	16,732	10.7	-11.3
Republic of Korea	4,689	5,946	7,065	7,900	8,049	5.2	1.9
China	2,512	3,937	5,465	6,126	7,906	5.1	29.1
France	5,756	6,264	6,570	7,073	7,163	4.6	1.3
United Kingdom	5,096	5,093	5,539	5,513	5,326	3.4	-3.4
Netherlands	4,504	4,550	4,422	4,341	4,445	2.9	2.4
Switzerland	3,294	3,613	3,814	3,749	3,673	2.4	-2.0
Sweden	2,887	3,334	3,658	4,136	3,581	2.3	-13.4
Italy	2,349	2,702	2,948	2,885	2,664	1.7	-7.7
Canada	2,320	2,573	2,848	2,913	2,569	1.6	-11.8
Finland	1,893	1,844	1,994	2,223	2,133	1.4	-4.0
Australia	2,001	2,003	2,053	1,946	1,754	1.1	-9.9
Israel	1,461	1,599	1,747	1,905	1,577	1.0	-17.2
All Others	10,277	11,159	12,216	13,230	12,442	8.0	-6.0
Total	136,754	149,670	159,957	163,252	155,900	100	-4.5

Source: WIPO Statistics Database

> The US saw a sharp drop in PCT filings (-10.8% or 5,594 applications) in 2009.

> The number of PCT applications filed in 2009 by applicants from China had the highest annual growth at 29.1%. PCT applications from Japan and the Republic of Korea also showed positive annual growth in 2009.

> Many European countries experienced decreases in PCT applications in 2009 compared to 2008, with the exception of France and the Netherlands. European Patent Convention (EPC) Member States, as a block, saw a decline of 5.7% in PCT applications from 2008 to 2009, with 53,678 filed in 2009.

1.3 PCT, Developing Countries and Countries in Transition

Table 1.3 shows the number of PCT applications filed by a selection of developing countries and countries in transition from 2005 to 2009.

Table 1.3. PCT Applications by Developing Countries and Countries in Transition, 2005 - 2009

Countries of Origin among Selected Developing Countries/Countries in Transition	Year of Filing				
	2005	2006	2007	2008	2009
Republic of Korea	4,689	5,946	7,065	7,900	8,049
China	2,512	3,937	5,465	6,126	7,906
India	679	836	901	1,070	835
Russian Federation	660	697	735	803	662
Singapore	455	483	522	563	578
Brazil	270	334	398	472	496
Turkey	174	269	359	393	385
South Africa	360	424	406	399	376
Malaysia	38	60	111	205	226
Mexico	141	168	186	213	193
Poland	97	101	107	128	174
Ukraine	60	77	94	99	77
Colombia	23	29	44	37	64
Chile	9	12	17	27	54
Egypt	51	41	40	43	33
Serbia		8	23	37	26
Bulgaria	22	26	30	27	25
Latvia	16	17	21	20	24
Lithuania	8	10	13	18	22
Morocco	9	10	18	16	22
All Others	186	258	224	244	246
Total	10,459	13,743	16,779	18,840	20,473

Source: WIPO Statistics Database

> The majority of developing countries and countries in transition saw increases in 2009 compared to the previous year, despite the onset of the economic crisis. However, the percentage increases are lower than those experienced in 2008, with the notable exception of Chinese PCT applications, which grew by 29.1% in 2009, compared to 12.1% in 2008.

> Since 2005, PCT applications from all developing countries and countries in transition combined show annual increases, although each annual increment is smaller than the previous one, i.e., 2006 growth was 31.4% followed by 22.1% in 2007, 12.3% in 2008 and 8.7% in 2009.

1.4 PCT Applications as Share of Resident Applications

Table 1.4 presents a hypothetical "conversion ratio" that seeks to capture how frequently applicants opt for a PCT application after filing a patent application at their national or regional patent office. Formally, the conversion ratio is defined as the total number of PCT applications filed by country A in year t divided by the total number of resident patent applications filed by country A in year t-1. (The total data on resident patent applications include regional patent applications.) The reason for the one-year lag between PCT applications and resident patent applications is that applicants have up to 12 months from the filing date of the earlier national filing to submit a PCT application.[4] For example, the conversion ratio for Germany is 0.27 (16,732 PCT applications in 2009 divided by 48,348 resident applications in 2008).

A high conversion ratio implies that a large proportion of resident applications result in PCT applications. Similarly, a low conversion ratio means only a small share of resident applications give rise to PCT applications.

It should be noted that numbers are somewhat biased as certain PCT applications do not have priority claims associated with prior resident filings. For example, an Israeli applicant may forgo filing a patent application at the Israeli Patent Office, but opt to file an application at the USPTO, where it is then "converted" into a PCT application. This explains why for certain countries the value of the conversation ratio exceeds 1.

Table 1.4. Conversion Ratio of Top 30 Countries, 2009

Country	Conversion Ratio from Resident Applications to PCT Applications	Change compared to 2008
Israel	1.53	-0.09
Luxembourg	1.41	-0.31
Australia	1.11	-0.21
Sweden	1.08	-0.21
Singapore	1.07	-0.17
Finland	0.92	0.02
Switzerland	0.74	0.00
Canada	0.73	-0.08
Netherlands	0.70	-0.05
Belgium	0.58	-0.11
Denmark	0.58	-0.02
Ireland	0.42	-0.05
Portugal	0.40	0.05
France	0.37	0.00
Spain	0.37	0.01
Austria	0.33	n.a.
Mexico	0.30	-0.06
United Kingdom	0.30	0.00
Malaysia	0.28	-0.03
Germany	0.27	-0.04
New Zealand	0.24	0.04
Czech Republic	0.23	0.03
United States of America	0.21	-0.01
Turkey	0.17	-0.04
Brazil	0.13	0.01
Japan	0.09	0.00
Poland	0.07	0.01
Republic of Korea	0.06	0.00
China	0.04	0.00
Russian Federation	0.02	-0.01

Source: WIPO Statistics Database

Note: The conversion ratio data reported above are not comparable to previously published data as filings made at the European Patent Office (EPO) by an applicant of an EPC Member State are now considered resident filings.

[4] The calculation of the conversion ratio should ideally be based on "first filings" at national patent offices. However, the data collected from most patent offices do not distinguish between "first" and "subsequent" filings. The figures presented in Table 1.4 are therefore based on total resident patent filings.

- The conversion ratio for the top 30 filing countries varied from 0.02 (Russian Federation) to 1.53 (Israel) in 2009. It appears to be associated with size of domestic market. The larger the country's domestic market, the lower the conversion ratio – certain exceptions notwithstanding. For example, China, Japan and the Republic of Korea have large domestic markets and conversion ratios of less than 0.1. In comparison, smaller countries, such as Israel and Switzerland, tend to have higher conversion ratios as they commercialize a higher proportion of their inventions in foreign markets.

- The 2009 conversion ratio for resident applications to PCT applications does not differ greatly from that of 2008. However, 16 of the 30 countries listed in Table 1.4 showed a slightly lower conversion ratio in 2009 compared to the previous year.

PCT Applicants

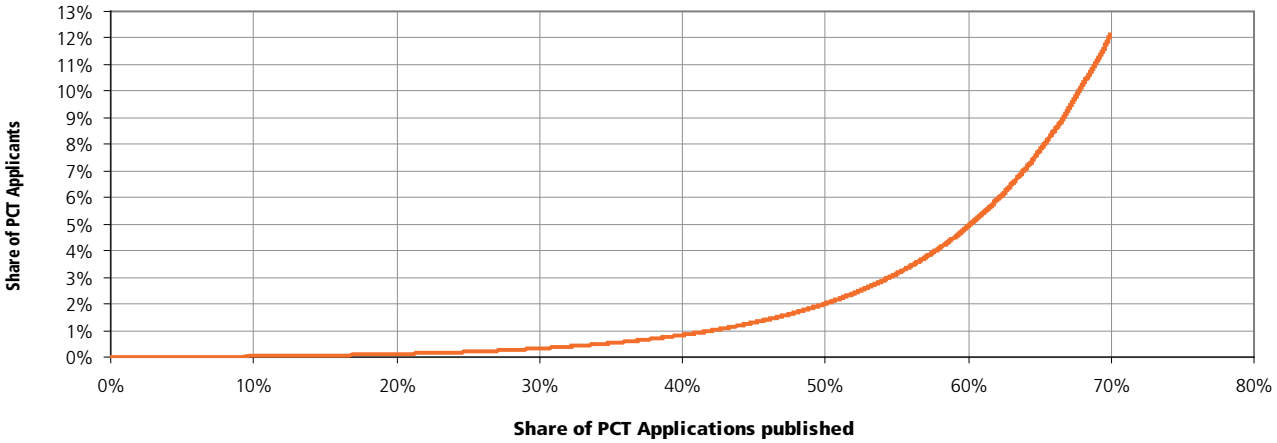
For statistical purposes, the PCT applicant is considered to be the first-named applicant in the PCT application. Applicants can be companies, universities, individuals, among others.

1.5 Top PCT Applicants

PCT applicants include entities that may file only one or a few applications per year as well as entities with more than 1,000 applications annually. Figure 1.5 depicts the exact distribution of filing entities.

Due to confidentiality requirements, the underlying data are based on the date of publication of the PCT application, rather than the filing date of the application as in preceding sub-sections. Where there are multiple co-applicants, only first-named applicants are considered when assigning applications to applicants. Under PCT rules, a PCT application should be published promptly after 18 months from the priority date. Since most applicants prefer to file PCT applications at the end of the 12-month priority period, the statistics based on publication date have a delay of approximately 6 months compared to those based on international filing date.

Figure 1.5. Distribution of PCT Applicants, 2009



Source: WIPO Statistics Database

> The PCT System is intensively used by a relatively small number of filers. The top 2% of applicants account for nearly 50% of PCT publications. The top 12% of applicants account for close to 70% of PCT publications. A large number of "occasional" users contribute to a relatively small portion of PCT applications.

Table 1.5a. Top PCT Applicants, 2009

2009 Rank	Position Changed	PCT Applicant's Name	Country of Origin	Number of PCT applications published	Change Compared to 2008
1	1	PANASONIC CORPORATION	Japan	1,891	162
2	-1	HUAWEI TECHNOLOGIES CO., LTD.	China	1,847	110
3	2	ROBERT BOSCH GMBH	Germany	1,587	314
4	-1	KONINKLIJKE PHILIPS ELECTRONICS N.V.	Netherlands	1,295	-256
5	6	QUALCOMM INCORPORATED	United States of America	1,280	373
6	3	TELEFONAKTIEBOLAGET LM ERICSSON (PUBL)	Sweden	1,240	256
7	1	LG ELECTRONICS INC.	Republic of Korea	1,090	98
8	4	NEC CORPORATION	Japan	1,069	244
9	-5	TOYOTA JIDOSHA KABUSHIKI KAISHA	Japan	1,068	-296
10	3	SHARP KABUSHIKI KAISHA	Japan	997	183
11	-5	SIEMENS AKTIENGESELLSCHAFT	Germany	932	-157
12	-3	FUJITSU LIMITED	Japan	817	-167
13	3	BASF SE	Germany	739	18
14	4	3M INNOVATIVE PROPERTIES COMPANY	United States of America	688	25
15	-8	NOKIA CORPORATION	Finland	663	-342
16	-2	MICROSOFT CORPORATION	United States of America	644	-161
17	2	SAMSUNG ELECTRONICS CO., LTD.	Republic of Korea	596	-43
18	10	NXP B.V.	Netherlands	593	186
19	2	MITSUBISHI ELECTRIC CORPORATION	Japan	569	66
20	3	HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P.	United States of America	554	58
21	-6	MOTOROLA, INC.	United States of America	538	-240
22	16	ZTE CORPORATION	China	517	188
23	-3	E.I. DUPONT DE NEMOURS AND COMPANY	United States of America	509	-8
24	1	ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE	Republic of Korea	452	7
25	4	SONY ERICSSON MOBILE COMMUNICATIONS AB	Sweden	435	33
26	4	BSH BOSCH UND SIEMENS HAUSGERÄTE GMBH	Germany	413	19
27	-10	INTERNATIONAL BUSINESS MACHINES CORPORATION	United States of America	401	-263
27	23	CANON KABUSHIKI KAISHA	Japan	401	121
29	14	BAKER HUGHES INCORPORATED	United States of America	375	79
30	3	DAIKIN INDUSTRIES, LTD.	Japan	374	4
31	42	MITSUBISHI HEAVY INDUSTRIES, LTD.	Japan	373	158
32	32	DAIMLER AG	Germany	363	127
33	4	KYOCERA CORPORATION	Japan	362	30
34	-10	THOMSON LICENSING	France	359	-103
35	20	SUMITOMO CHEMICAL COMPANY, LIMITED	Japan	352	89
36	-9	THE PROCTER & GAMBLE COMPANY	United States of America	341	-71
37	-11	CONTINENTAL AUTOMOTIVE GMBH	Germany	334	-98
38	3	SONY CORPORATION	Japan	328	21
39	35	KABUSHIKI KAISHA TOSHIBA	Japan	326	113
40	-6	THE REGENTS OF THE UNIVERSITY OF CALIFORNIA	United States of America	321	-26
41	42	HONDA MOTOR CO., LTD.	Japan	318	125
42	214	NOKIA SIEMENS NETWORKS OY	Finland	313	245
43	-1	EASTMAN KODAK COMPANY	United States of America	311	12
44	-5	GENERAL ELECTRIC COMPANY	United States of America	307	-19
44	>500	MONDOBIOTECH LABORATORIES AG	Liechtenstein	307	307
46	1	DOW GLOBAL TECHNOLOGIES INC.	United States of America	304	19
47	-15	INA-SCHAEFFLER KG	Germany	299	-77
48	32	APPLIED MATERIALS, INC.	United States of America	296	99
49	19	CORNING INCORPORATED	United States of America	285	57
50	-28	PIONEER CORPORATION	Japan	283	-214
50	25	ALCATEL LUCENT	France	283	71

Source: WIPO Statistics Database

> Panasonic Corporation (Japan) returned to the top spot in the list of PCT applicants, nudging Huawei Technologies, Co., Ltd. (China) into second place. Four Japanese companies are among the top 10 applicants. Eight of the top 10 applicants saw more PCT applications published in 2009 than in 2008 – with the exception of Philips (rank 4) and Toyota (rank 9), with fewer PCT applications published in 2009 compared to the previous year.

> The pharmaceutical company Mondobiotech Laboratories AG (Liechtenstein) entered into the top 50 list in 2009. The communications network company Nokia Siemens Networks OY (Finland) moved up more than 200 places in the top user list in 2009 to become the 42nd largest PCT user.

Table 1.5b. Top PCT Applicants: University Sector, 2009

2009 Rank: University Sector	2009 Overall Rank	Position Changed	PCT Applicant's Name	Country of Origin	Number of PCT applications published	Change Compared to 2008
1	40	-6	THE REGENTS OF THE UNIVERSITY OF CALIFORNIA	United States of America	321	-26
2	104	-19	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	United States of America	145	-44
3	130	-36	BOARD OF REGENTS, THE UNIVERSITY OF TEXAS SYSTEM	United States of America	126	-33
4	144	-24	THE TRUSTEES OF COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK	United States of America	110	-20
5	148	2	PRESIDENT AND FELLOWS OF HARVARD COLLEGE	United States of America	109	-1
6	157	-24	UNIVERSITY OF FLORIDA RESEARCH FOUNDATION, INC.	United States of America	103	-15
7	176	68	THE UNIVERSITY OF TOKYO	Japan	94	23
8	191	19	THE JOHNS HOPKINS UNIVERSITY	United States of America	87	6
9	208	-35	THE TRUSTEES OF THE UNIVERSITY OF PENNSYLVANIA	United States of America	80	-19
10	257	38	UNIVERSITY OF UTAH RESEARCH FOUNDATION	United States of America	66	6
11	262	-75	WISCONSIN ALUMNI RESEARCH FOUNDATION	United States of America	64	-25
12	272	-68	THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY	United States of America	62	-20
13	275	-27	THE REGENTS OF THE UNIVERSITY OF MICHIGAN	United States of America	61	-9
14	278	31	UNIVERSITY OF SOUTHERN CALIFORNIA	United States of America	60	2
15	310	76	ARIZONA BOARD OF REGENTS	United States of America	55	10
16	317	-22	MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH	United States of America	54	-6
17	329	-125	CALIFORNIA INSTITUTE OF TECHNOLOGY	United States of America	52	-30
17	329	-73	THE BOARD OF TRUSTEES OF THE UNIVERSITY OF ILLINOIS	United States of America	52	-16
17	329	10	UNIVERSITY OF WASHINGTON	United States of America	52	0
20	344	63	INDUSTRY-ACADEMIC COOPERATION FOUNDATION, YONSEI UNIVERSITY	Republic of Korea	50	7
21	351	-95	SEOUL NATIONAL UNIVERSITY INDUSTRY FOUNDATION	Republic of Korea	49	-19
22	368	54	RAMOT AT TEL AVIV UNIVERSITY LTD.	Israel	47	6
23	383	12	KYOTO UNIVERSITY	Japan	45	1
23	383	125	PURDUE RESEARCH FOUNDATION	United States of America	45	9
23	383	139	ISIS INNOVATION LIMITED	United Kingdom	45	10
26	401	42	THE OHIO STATE UNIVERSITY RESEARCH FOUNDATION	United States of America	43	3
26	401	349	KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY	Republic of Korea	43	19
28	410	-87	IMPERIAL COLLEGE INNOVATIONS LIMITED	United Kingdom	42	-14
28	410	235	NEW YORK UNIVERSITY	United States of America	42	14
30	417	-22	UNIVERSITY OF MASSACHUSETTS	United States of America	41	-3
31	428	-83	UNIVERSITY OF SOUTH FLORIDA	United States of America	40	-11
32	437	101	TOHOKU UNIVERSITY	Japan	39	5
32	437	135	POSTECH FOUNDATION	Republic of Korea	39	7
34	450	-121	OSAKA UNIVERSITY	Japan	38	-17
34	450	-71	DUKE UNIVERSITY	United States of America	38	-8
34	450	-28	YALE UNIVERSITY	United States of America	38	-3
34	450	183	THE REGENTS OF THE UNIVERSITY OF COLORADO	United States of America	38	9
34	450	215	DANMARKS TEKNISKE UNIVERSITET	Denmark	38	11
39	470	-123	THE RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK	United States of America	37	-13
40	487	-65	UNIVERSITY OF ROCHESTER	United States of America	36	-5
40	487	203	EIDGENOSSISCHE TECHNISCHE HOCHSCHULE ZÜRICH	Switzerland	36	10
42	515	130	KEIO UNIVERSITY	Japan	34	6
43	529	-134	YISSUM RESEARCH DEVELOPMENT COMPANY OF THE HEBREW UNIVERSITY OF JERUSALEM	Israel	33	-11
43	529	9	THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	United States of America	33	-1
43	529	104	THE UNIVERSITY OF BRITISH COLUMBIA	Canada	33	4
46	551	-192	NORTHWESTERN UNIVERSITY	United States of America	32	-17
46	551	262	NATIONAL UNIVERSITY OF SINGAPORE	Singapore	32	10
48	582	29	NATIONAL UNIVERSITY CORPORATION HOKKAIDO UNIVERSITY	Japan	30	0
48	582	319	UNIVERSITY OF MIAMI	United States of America	30	10
50	596	-189	UNIVERSITY OF PITTSBURGH OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION	United States of America	29	-14
50	596	-44	THE UNIVERSITY OF QUEENSLAND	Australia	29	-4
50	596	154	TOKYO INSTITUTE OF TECHNOLOGY	Japan	29	5

Source: WIPO Statistics Database

> The University of California accounted for the largest number of published PCT applications in 2009 in the category of educational institutions. It is the only one in that category featuring in the overall top 100 list of applicants.

> Most top-filing universities experienced declines in the number of published applications in 2009 and slipped down the ranking as a result.

Fields of Technology of PCT Applications

1.6 PCT Applications by Field of Technology

PCT applications span a wide range of technologies – some emerging, some maturing and others declining. Table 1.6 shows the distribution of applications across fields of technology in 2009 and their percentage change compared to 2008. As in the previous sub-section, statistics are based on the publication rather than the filing date. The breakdown of published PCT applications by technology relies on a concordance table between International Patent Classification (IPC) symbols and 35 fields of technology.[5] As a PCT application can be assigned multiple IPC symbols corresponding to more than one field, the total count by field of technology is greater than the total number of published PCT applications.

Table 1.6. PCT Applications Published by Field of Technology, 2005 - 2009

	Technical Field	Publication Year					Change Compared to 2008 (%)
		2005	2006	2007	2008	2009	
I	**Electrical engineering**						
1	Electrical machinery, apparatus, energy	7,826	9,017	10,055	11,303	11,393	0.8
2	Audio-visual technology	6,000	6,597	6,812	6,726	6,375	-5.2
3	Telecommunications	7,276	8,471	9,511	10,216	9,343	-8.5
4	Digital communication	6,416	7,289	8,918	10,187	10,452	2.6
5	Basic communication processes	1,544	1,721	1,765	1,892	1,809	-4.4
6	Computer technology	10,455	12,209	13,516	14,048	12,560	-10.6
7	IT methods for management	1,551	2,075	2,409	2,947	2,677	-9.2
8	Semiconductors	4,615	5,941	6,409	6,897	7,588	10.0
II	**Instruments**						
9	Optics	5,088	5,897	6,045	6,420	6,174	-3.8
10	Measurement	6,981	8,088	8,776	9,158	9,070	-1.0
11	Analysis of biological materials	3,008	3,045	2,935	3,014	2,968	-1.5
12	Control	2,965	3,363	3,509	3,620	3,429	-5.3
13	Medical technology	9,688	11,324	12,221	12,852	12,091	-5.9
III	**Chemistry**						
14	Organic fine chemistry	8,873	9,614	9,625	9,680	8,841	-8.7
15	Biotechnology	7,605	7,506	7,540	7,752	7,446	-3.9
16	Pharmaceuticals	10,343	12,947	13,071	13,254	12,200	-8.0
17	Macromolecular chemistry, polymers	4,010	4,718	4,812	4,995	4,917	-1.6
18	Food chemistry	1,986	2,331	2,329	2,429	2,211	-9.0
19	Basic materials chemistry	5,393	6,300	6,967	7,484	7,136	-4.6
20	Materials, metallurgy	3,192	3,724	4,012	4,309	4,280	-0.7
21	Surface technology, coating	3,667	4,373	4,306	4,411	4,150	-5.9
22	Micro-structural and nano-technology	242	357	430	531	585	10.2
23	Chemical engineering	4,721	5,392	5,566	6,015	5,800	-3.6
24	Environmental technology	2,121	2,562	2,920	3,326	3,282	-1.3
IV	**Mechanical engineering**						
25	Handling	4,281	4,855	5,085	5,079	4,830	-4.9
26	Machine tools	3,329	3,589	3,730	4,249	3,953	-7.0
27	Engines, pumps, turbines	3,440	3,951	4,542	5,182	5,330	2.9
28	Textile and paper machines	3,050	3,467	3,135	3,224	2,997	-7.0
29	Other special machines	4,853	5,400	5,466	6,035	5,874	-2.7
30	Thermal processes and apparatus	1,907	2,173	2,493	2,816	3,018	7.2
31	Mechanical elements	4,110	4,751	5,132	5,856	5,566	-5.0
32	Transport	5,590	6,098	6,795	7,601	7,415	-2.4
V	**Other fields**						
33	Furniture, games	3,638	4,187	4,488	4,436	4,018	-9.4
34	Other consumer goods	3,197	3,713	3,853	4,127	3,848	-6.8
35	Civil engineering	3,906	4,412	4,734	5,313	5,397	1.6

Source: WIPO Statistics Database

[5] The IPC-Technology concordance table is available at: http://www.wipo.int/ipstats/en/statistics/patents/

> Reflecting the overall decline in 2009, the number of PCT publications decreased over 2008 figures in most of the 35 technical fields. The greatest drops, in absolute numbers, are for *computer technology* (-1,488 applications, down 10.6%); pharmaceuticals (-1,054 applications, down 8.0%) and *telecommunications* (-873 applications, down 8.5%).

> Several technical fields continued to grow. In percentage increase, *micro-structural and nano-technology* (+10.2% over 2008) and, in absolute numbers, *semiconductors* (+691 applications, up 10% over 2008) and *digital communication* (+265 applications, up 2.6% over 2008) showed the largest increases.

1.7 PCT Applications by Field of Technology and Country of Origin

Table 1.7 presents the fields of technology of published PCT applications and their growth compared to 2008 for each of the top 10 applicant countries of origin. The upper figure in each field of technology row indicates the number of published applications, and the lower figure indicates growth rate.

Table 1.7. PCT Applications by Field of technology and Top 10 Countries, 2009

Technical Field	Country of Origin									
	CH	CN	DE	FR	GB	JP	KR	NL	SE	US
I Electrical engineering										
1 Electrical machinery, apparatus, energy	281	453	1,879	379	256	3,745	415	325	118	2,358
	16.6	19.8	-2.9	-3.8	-14.4	9.9	5.6	-11.4	21.6	-11.4
2 Audio-visual technology	68	218	375	231	123	2,843	404	180	131	1,204
	-21.8	43.4	-7.4	-1.3	-3.1	0.0	5.2	-38.1	13.9	-19.6
3 Telecommunications	34	942	316	428	184	2,270	1,150	185	644	2,208
	-34.6	27.0	-15.7	-4.0	-32.1	6.6	9.6	-10.2	11.8	-30.5
4 Digital communication	33	2,084	308	548	212	1,240	694	221	944	2,738
	3.1	19.4	-36.0	9.6	-24.6	0.2	12.5	0.5	14.7	-5.7
5 Basic communication processes	21	85	120	79	58	515	65	93	48	533
	16.7	88.9	-22.1	6.8	31.8	-3.2	4.8	-2.1	-15.8	-11.8
6 Computer technology	126	387	619	488	322	2,376	536	455	319	5,319
	-0.8	9.6	2.7	8.2	-15.7	0.6	-9.6	8.3	11.1	-20.9
7 IT methods for management	40	51	65	74	82	285	184	26	59	1,342
	60.0	-8.9	-11.0	5.7	-35.9	1.4	28.7	-10.3	28.3	-14.0
8 Semiconductors	63	136	586	164	89	3,283	379	211	21	2,239
	23.5	11.5	9.9	25.2	14.1	14.4	25.9	8.8	-4.5	0.5
II Instruments										
9 Optics	54	116	512	179	111	2,905	237	210	49	1,360
	-27.0	6.4	5.3	-5.8	-14.6	0.6	-2.5	1.0	-12.5	-11.7
10 Measurement	237	166	1,355	483	361	1,930	215	459	186	2,435
	-7.4	14.5	1.6	25.8	-13.2	2.0	29.5	11.7	-2.1	-10.4
11 Analysis of biological materials	97	29	241	144	163	392	88	89	74	1,124
	-5.8	-35.6	9.0	21.0	-5.8	7.4	109.5	-20.5	7.2	-9.2
12 Control	82	64	583	142	129	677	87	111	60	887
	-5.7	42.2	24.3	7.6	-27.9	11.9	11.5	79.0	-16.7	-31.1
13 Medical technology	355	195	922	398	458	1,319	241	402	261	5,573
	-12.8	-3.5	-3.3	25.9	-5.0	1.2	-1.2	-7.2	-12.4	-8.2
III Chemistry										
14 Organic fine chemistry	453	254	1,046	615	458	1,370	209	173	184	2,550
	-16.0	19.2	-3.5	14.7	-5.2	0.3	-14.7	-15.2	-21.4	-19.7
15 Biotechnology	236	143	556	312	328	849	261	220	73	2,964
	15.1	-4.0	0.7	13.0	18.8	0.7	13.0	7.3	-21.5	-14.0
16 Pharmaceuticals	602	321	779	566	615	1,207	259	231	291	4,528
	-7.1	-8.5	-8.5	12.7	1.8	-12.1	-3.0	-10.1	-13.9	-16.9
17 Macromolecular chemistry, polymers	94	48	721	201	63	1,572	112	218	11	1,356
	-32.4	-5.9	12.3	14.9	-31.5	-0.4	-20.6	-10.7	-35.3	-5.3
18 Food chemistry	171	60	131	88	76	378	56	192	17	518
	31.5	13.2	-21.1	-6.4	-6.2	-18.2	-38.5	-4.0	-10.5	-15.5
19 Basic materials chemistry	163	130	1,044	296	242	1,534	128	235	39	2,487
	-30.3	7.4	1.9	26.0	-5.5	-0.8	-7.2	-11.0	39.3	-10.1
20 Materials, metallurgy	82	110	556	286	95	1,382	139	56	67	815
	9.3	23.6	-7.2	22.7	4.4	4.5	10.3	-40.4	19.6	-13.4
21 Surface technology, coating	85	71	459	188	84	1,445	74	69	64	1,130
	11.8	-15.5	-14.5	31.5	-24.3	3.3	-10.8	-19.8	30.6	-17.0
22 Micro-structural and nano-technology	2	2	61	18	11	112	44	18	9	224
	-33.3	-50.0	45.2	20.0	450.0	-3.4	69.2	28.6	-10.0	3.2
23 Chemical engineering	147	133	851	338	213	1,070	121	218	108	1,601
	-7.5	-24.0	-6.7	17.4	-3.2	-0.3	8.0	-7.6	0.0	-6.6
24 Environmental technology	50	89	416	191	113	788	117	90	43	810
	-36.7	9.9	2.5	9.8	-13.7	1.0	44.4	-17.4	-30.6	-7.5

Technical Field	Country of Origin									
	CH	CN	DE	FR	GB	JP	KR	NL	SE	US
IV Mechanical engineering										
25 Handling	322	100	576	209	194	802	126	122	107	1,213
	28.3	-9.1	-10.7	-4.1	-19.8	1.8	20.0	-16.4	16.3	-14.0
26 Machine tools	86	120	831	162	123	928	107	32	136	799
	-3.4	18.8	-2.9	-0.6	13.9	-2.8	-11.6	-43.9	-4.2	-16.5
27 Engines, pumps, turbines	98	141	1,302	380	176	1,128	114	73	115	965
	4.3	8.5	10.3	18.0	-2.2	-0.8	0.9	28.1	-4.2	-1.3
28 Textile and paper machines	105	64	444	101	83	708	62	75	51	759
	-26.1	-21.0	-3.9	2.0	-12.6	-2.3	-11.4	5.6	10.9	-13.7
29 Other special machines	152	95	824	300	199	1,270	149	199	113	1,353
	-13.1	-15.9	9.7	10.3	3.6	5.0	10.4	3.1	-23.1	-16.5
30 Thermal processes and apparatus	87	165	407	134	78	647	175	61	76	590
	42.6	33.1	4.1	19.6	5.4	18.1	-16.7	24.5	33.3	5.5
31 Mechanical elements	102	133	1,508	295	221	1,123	65	87	181	1,000
	-2.9	5.6	-8.1	6.1	-0.5	-0.3	-19.8	24.3	-11.7	-14.8
32 Transport	90	182	1,783	706	234	1,590	163	99	284	1,173
	45.2	27.3	1.0	-0.7	-10.0	-0.5	7.2	35.6	-13.4	-16.9
V Other fields										
33 Furniture, games	124	221	387	126	215	461	230	108	81	1,141
	-7.5	-4.7	0.0	-8.7	-17.9	10.3	-5.7	1.9	-17.3	-16.7
34 Other consumer goods	109	142	577	178	213	460	380	78	61	890
	-16.2	-10.1	7.9	-0.6	6.5	3.1	3.5	-30.4	-18.7	-17.4
35 Civil engineering	70	148	600	326	305	388	183	139	112	1,518
	-9.1	-19.6	0.7	30.4	-0.7	22.0	-2.7	8.6	-8.9	-2.1

Source: WIPO Statistics Database

Note: Two-letter codes are used for countries: 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). The upper part of each row reports absolute numbers, and the lower part reports the percentage change.

> The growth rates of technical fields vary widely from one country to another. For example, the number of published PCT applications from Japan in the telecommunications field increased by 6.6% (with 2,270 PCT applications) in 2009, while the number of PCT applications from the United States of America in that field decreased by 30.5% (with 2,208 PCT applications) in the same year.

> The number of published PCT applications in the field of semiconductors increased for all countries in Table 1.7, except for Sweden.

2. PCT NATIONAL PHASE ENTRIES

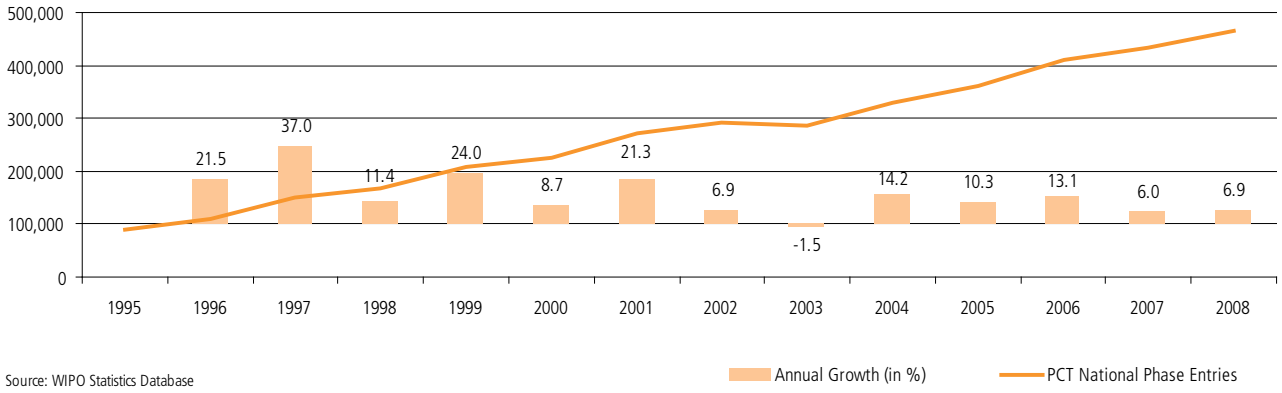
The national or regional patent office at which the applicant enters the PCT national phase initiates the granting procedure according to prevailing national law. Statistics associated with PCT national phase entry offer information on international patenting strategies. This section briefly describes the global trend before reviewing national phase entry by applicants' country of origin and by patent office.

Global Trends

2.1 PCT National Phase Entry Trends

Figure 2.1 shows the number of PCT national phase entries from 1995 to 2008.[6] PCT national phase entries saw double-digit growth between 1996 and 2001 (except for 2000 when the growth rate dropped slightly below 9%). Thirty-seven countries joined the PCT System between 1994 and 1999. They became eligible for PCT national phase entry 8 to 18 months later. This geographical expansion of the PCT System, along with growth in PCT filings, contributed to the rapid increase in PCT national phase entries for 1996-2001. Despite lower growth after 2001, the average annual growth rate from 2002 to 2008 was 8%.

Figure 2.1. PCT National Phase Entries, 1995 – 2008



Source: WIPO Statistics Database

> In 2008, there were about 464,000 PCT national phase entries at patent offices worldwide, representing an increase of 6.9% over 2007.[7] However, WIPO's preliminary information for 2009 PCT national phase entries suggests that 2008 might be the end of a five-year growth cycle.

[6] Statistics for national phase entry are based on data supplied to WIPO by national and regional patent offices several months after the end of each year. The latest available data therefore refer to 2008 (except for the patent offices of Brazil, Colombia, and Norway for which only 2007 data were available).

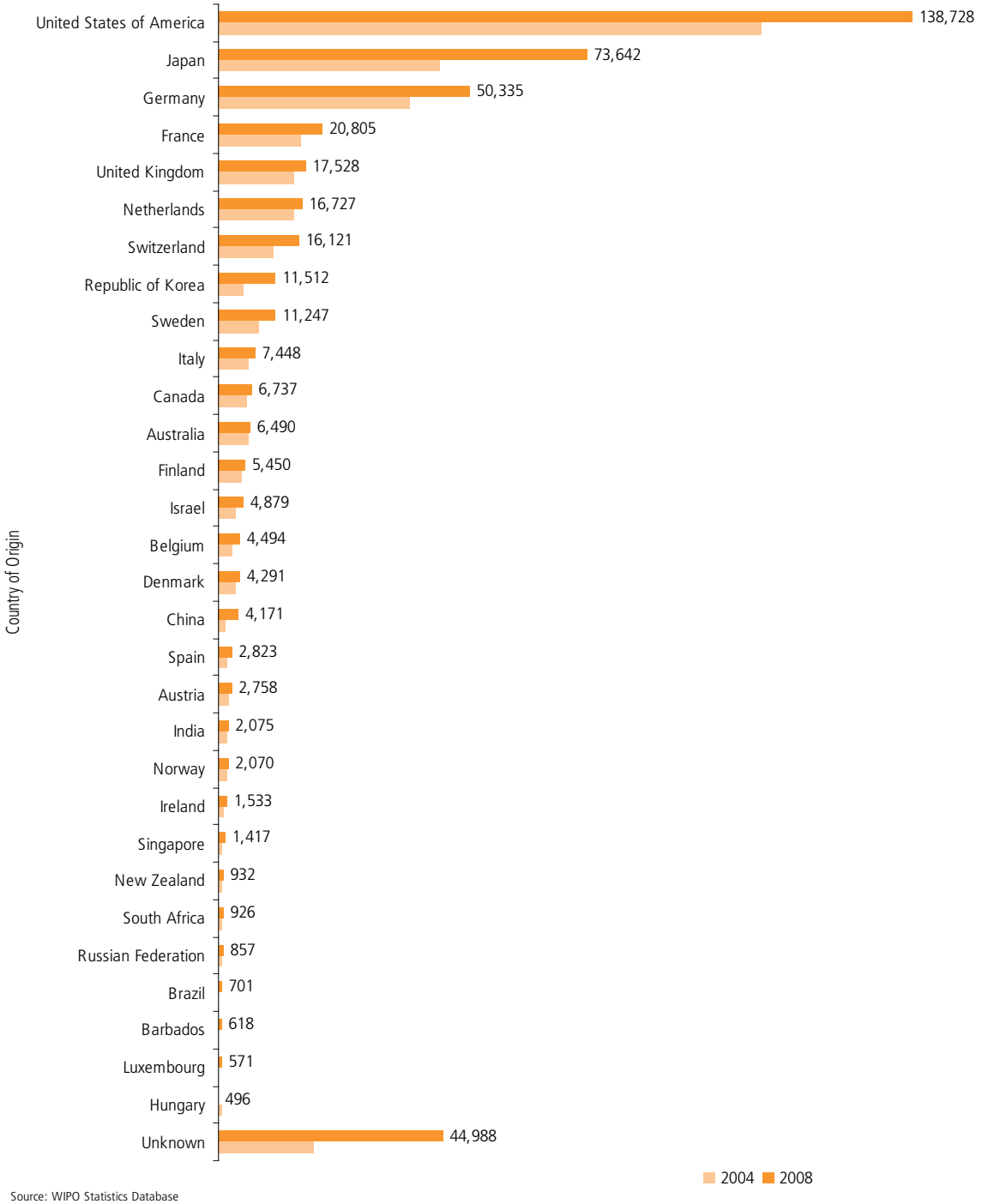
[7] Estimate – missing data are estimated by WIPO on an aggregate level, using simple extrapolations of past trends.

National Phase Entries by Country of Origin

2.2 Top Countries: National Phase Entries

Figure 2.2 shows the number of PCT national phase entries by applicants' country of origin for the top 30 filing countries in 2008 and, for comparison purposes, in 2004.[8]

Figure 2.2. PCT National Phase Entries by Country, 2004 and 2008



Source: WIPO Statistics Database

> Applicants from the US accounted for 138,728 of PCT national phase entries in 2008 worldwide, followed by those from Japan (73,642) and Germany (50,335).

> Only a small number of developing countries and countries in transition are on the top 30 list, although those that are on the list have experienced among the fastest growth rates in number of national phase entries.

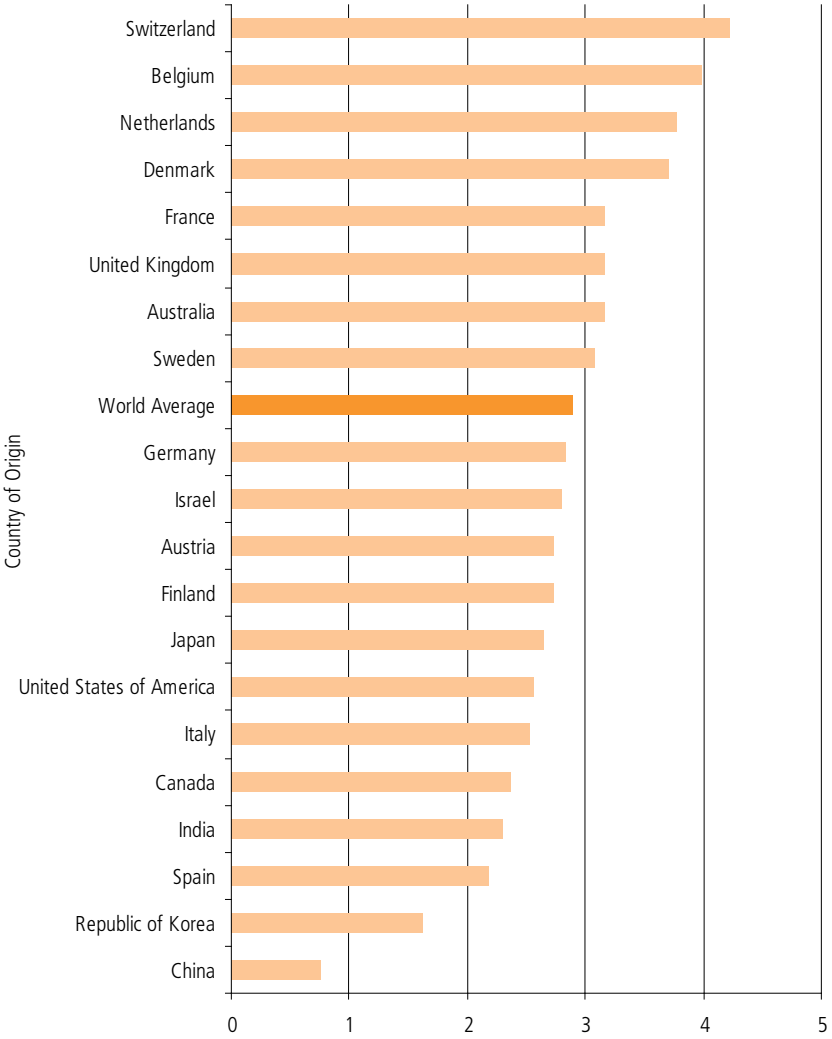
[8] Data from the Canadian Intellectual Property Office refers to 2005 instead of 2004.

2.3 Number of National Phase Entries per PCT Application

Figure 2.3 depicts the average number of PCT national phase entries per application.[9] In calculating this number, PCT national phase entries are compared with PCT applications filed 12 months earlier (i.e., national phase entries in 2008 are compared with PCT filings in 2007). Since most applicants enter the PCT national phase around 18 months from the international filing date and filings have grown in the relevant years, the numbers shown are slightly below the actual ones.

It should also be kept in mind that a PCT national phase entry at a regional patent office may eventually turn into several national patents. Thus, the number of national jurisdictions in which applicants seek protection is invariably higher than the number of national phase entries.

Figure 2.3. Average Number of National Phase Entries per PCT Application, 2008



Source: WIPO Statistics Database

> On average, applicants using the PCT system enter the national phase in slightly less than three patent offices for every PCT application filed.

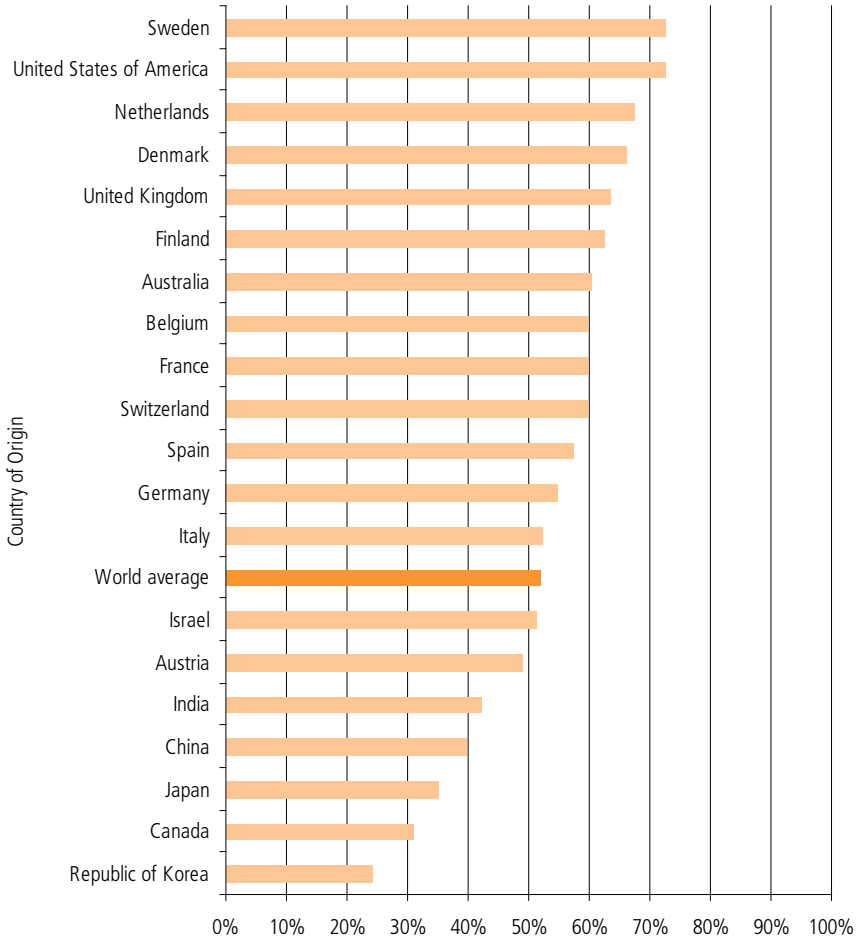
> In 2008, applicants from Switzerland had, on average, 4.2 PCT national phase entries for every PCT application. In contrast, the average number of PCT national phase entries by applicants from China and the Republic of Korea was relatively low (below 2), revealing a smaller country coverage in the international patenting strategies of applicants from those countries.

[9] The numbers presented include PCT applications which do not result in any national phase entry

2.4 Share of PCT National Phase Entries in Total Filings Abroad

Although the PCT System offers several important benefits to patent applicants, some still use the conventional "Paris Convention" route for filing applications abroad. Figure 2.4 presents the share of PCT national phase entries in total patent filings abroad. This share captures the extent to which applicants from different countries rely on the PCT System when seeking patent protection abroad.[10]

Figure 2.4. Share of PCT National Phase Entries in Total Filings Abroad, 2008



Source: WIPO Statistics Database

> In 2008, PCT national phase entries accounted for 52% of patent applications filed abroad.

> More than 70 percent of applications filed abroad by applicants from Sweden or from the United States of America were filed via the PCT System. The remaining third were filed directly at foreign patent offices. In contrast, only around 24% of patent applications filed abroad by applicants from the Republic of Korea were filed via the PCT System.

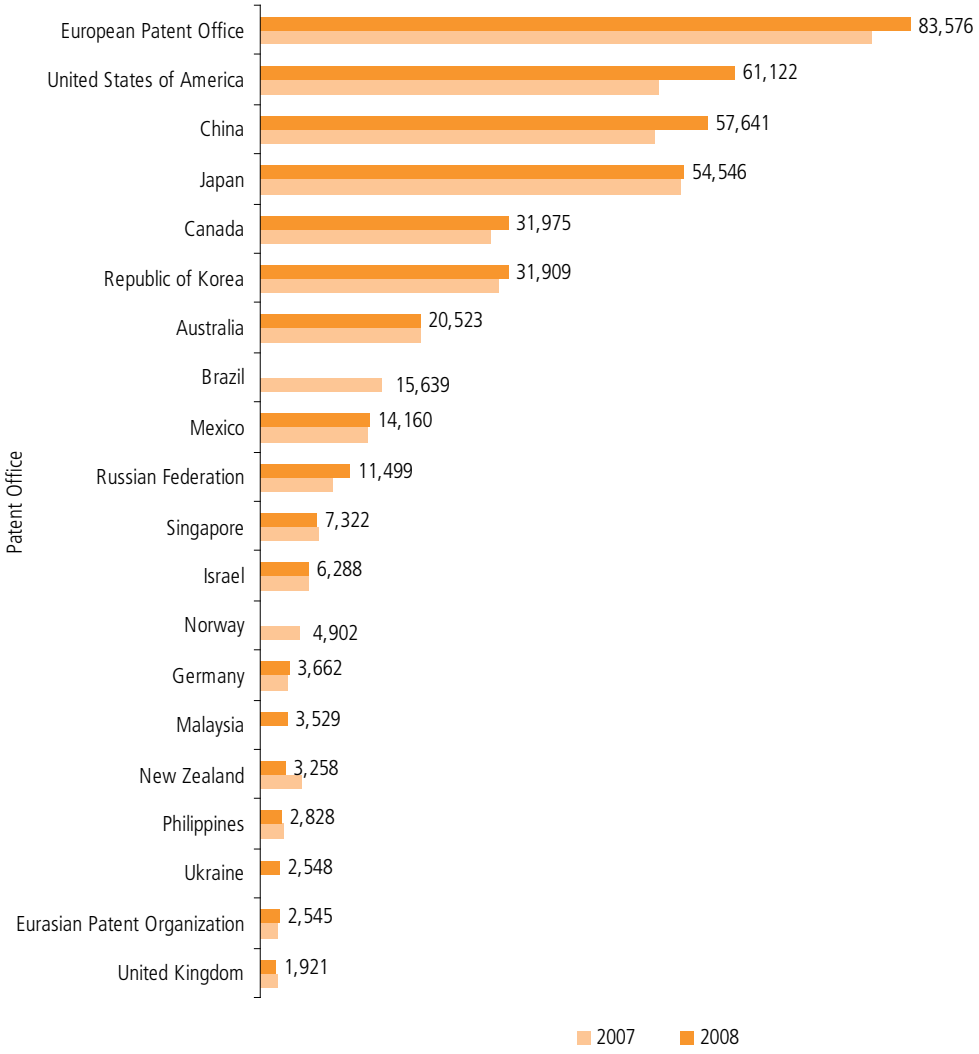
[10] In this sub-section, PCT national phase entries include only entries at patent offices of other countries, i.e., they exclude national phase entries in an applicant's home country. However, PCT national phase entries at the EPO by applicants from EPC Member countries are included in the calculation of national phase entries.

National Phase Entries By Office

2.5 Top 20 Patent Offices: National Phase Entries

Figure 2.5 depicts the number of PCT national phase entries by patent office. Among other things, it captures the commercial attractiveness of the country or region represented by that patent office.[11]

Figure 2.5. PCT National Phase Entries by Office, 2007 and 2008



Source: WIPO Statistics Database

> The EPO was the most preferred destination, reflecting the large number of EPC Member States. It had more than 80,000 PCT national phase entries in 2008, followed by the USPTO, the State Intellectual Property Office of the People's Republic of China (SIPO) and the JPO.

> In 2008, PCT national phase entries at the top 10 and top 20 offices accounted for, respectively, 82% and 91% of total national phase entries worldwide. In other words, most PCT applicants focus only on the largest markets and do not seek universal coverage.

[11] For some offices, such as France, the "national route" via the PCT System is closed (See "PCT Contracting States" in the annex for further details). 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). Accordingly, relevant national phase entries are included in the numbers for regional offices.

2.6 National Phase Entries by Patent Office and Country of Origin

Table 2.6 shows the number of PCT national phase entries at the top 30 patent offices, broken down by the top 10 countries of origin in 2008. This two-dimensional matrix captures the "flow of patents" between countries, via the PCT.

Table 2.6. National Phase Entries at Patent Offices by Top Country, 2008

Patent Office	Country of Origin											
	US	JP	DE	FR	GB	NL	CH	KR	SE	IT	Others/ Unknown	Total
European Patent Office	27,692	12,084	12,062	4,614	3,329	3,333	2,601	1,979	2,387	1,770	11,725	83,576
United States of America	8,543	15,988	9,450	3,762	4,017	2,159	1,312	2,410	1,617	1,631	10,233	61,122
China	17,773	13,766	6,522	2,333	1,627	2,725	1,812	2,522	1,674	837	6,050	57,641
Japan	17,718	12,582	5,974	2,594	1,712	2,770	1,840	2,121	1,331	625	5,279	54,546
Canada	15,194	1,921	2,757	1,552	1,340	694	1,471	352	624	512	5,558	31,975
Republic of Korea	10,724	9,513	3,014	1,282	674	1,174	1,116	423	565	285	3,139	31,909
Australia	9,137	1,259	1,332	661	1,119	548	1,099	286	477	304	4,301	20,523
Brazil (2007)	5,946	1,021	1,952	1,071	538	786	1,111	235	425	377	2,177	15,639
Mexico	7,086	561	1,319	614	433	478	957	370	385	238	1,719	14,160
Russian Federation	3,178	1,009	1,882	767	347	688	755	318	438	349	1,768	11,499
Singapore	3,116	906	484	236	317	214	427	84	204	78	1,256	7,322
Israel	2,741	254	28	151	277	52	25	28	114	33	2,585	6,288
Norway (2007)	1,822	257	492	211	291	235	322	23	283	75	891	4,902
Germany	1,046	1,079	892	29	23	23	49	142	39	4	336	3,662
Malaysia	1,209	511	321	122	209	275	213	55	85	22	507	3,529
New Zealand	1,083	89	218	92	276	78	84	3	138	33	1,164	3,258
Philippines	959	319	298	94	172	84	295	50	113	23	421	2,828
Ukraine	657	88	479	165	132	82	216	17	81	65	566	2,548
Eurasian Patent Organization	623	68	349	125	166	158	145	8	25	76	802	2,545
United Kingdom	842	204	31	9	319	37	8	51	14	5	401	1,921
Colombia (2007)	685	51	204	79	1	56		7	178	32	454	1,747
Morocco	157	36	64	143	59	29	124	2	4	22	127	767
African Regional Intellectual Property Organization	108	7	36	19	36	11	23	1	3	9	157	410
T F Y R of Macedonia	134	8	50	37	35	2	3		11	22	104	406
Sri Lanka	69	12	2	2	20	3	13	2	5	4	132	264
Guatemala	96	4	36	12	8	1	41	2		1	39	240
Turkey	43	7	9	2	1		11	7		1	96	177
Uzbekistan	50	2	14	2	17	11	13	4		3	50	166
Kazakhstan	44		16	2	1	1		3		2	66	135
Spain	5		9	3	1		1	1			81	101

Source: WIPO Statistics Database

Note: Two-letter codes are used for countries: CH (Switzerland), DE (Germany), FR (France), GB (United Kingdom), IT (Italy), JP (Japan), KR (Republic of Korea), NL (Netherlands), SE (Sweden) and US (United States of America).

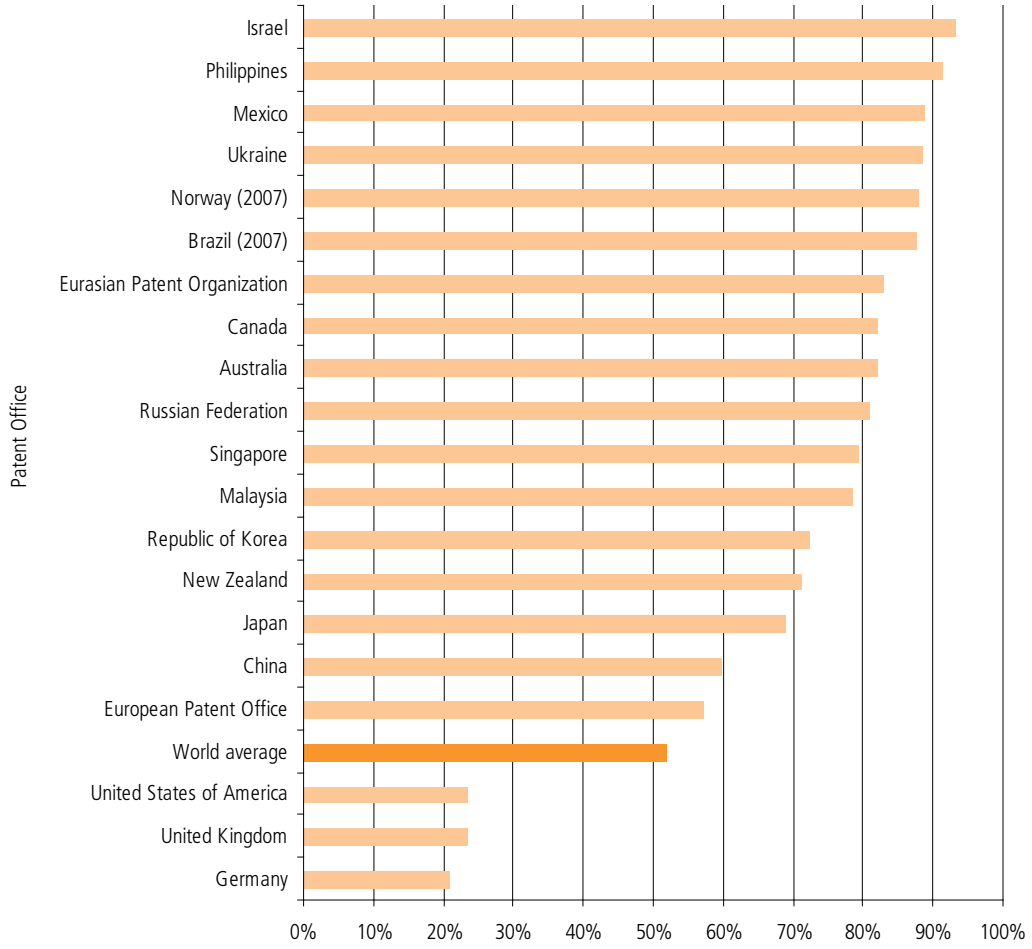
> Among the 83,576 PCT national phase entries at the EPO, applicants from the United States of America accounted for 27,692 entries (33.1%), applicants from Japan 12,084 (14.5%) and applicants from Germany 12,062 (14.4%).

> A PCT applicant seeking protection in an EPC Member State (see list of "PCT Contracting States" in the annex) can choose between entering the national phase at the national office (provided the "national route" is not closed) or, instead, at the EPO. As a result, the number of PCT national phase entries at some European national patent offices is lower than would otherwise be expected by the size of that particular country's economy. It does not directly reflect the demand for patent protection via the PCT in those countries.

2.7 Share of PCT National Phase Entries in Total Non-Resident Filings

Figure 2.7 depicts the share of PCT national phase entries in total non-resident filings in 2008.[12] Like Figure 2.4, this indicator captures the extent to which applicants rely on the PCT System rather than the "Paris Convention" route when seeking patent protection abroad. Unlike Figure 2.4, however, this information is presented from the perspective of patent offices selected by applicants for national phase entry, rather than the applicants' country of origin.

Figure 2.7. Share of PCT National Phase Entries in Total Non-Resident Filings, 2008



Source: WIPO Statistics Database

> As already indicated in Figure 2.4, PCT national phase entries accounted for the majority of non-resident patent filings in 2008 (52%). PCT applicants seeking patent protection in EPC Member States seem to prefer to enter the national phase at the EPO rather than at national patent offices, as suggested by the low shares for Germany and the United Kingdom. The relatively low share of PCT national phase entries at the USPTO (23%) can be partly explained by the higher share of non-resident applications from Japan and the Republic of Korea, whose applicants prefer direct filings at foreign patent offices rather than the PCT route (see Figure 2.4).

[12] Similar to sub-section 2.4, PCT national phase entries here include only entries by non-resident applicants; they exclude entries by resident applicants. However, PCT national phase entries at the EPO by applicants from EPC Member States are included in the calculation of national phase entries.

SECTION B – PERFORMANCE OF THE PCT SYSTEM

Receiving Offices

A PCT application is filed with a "Receiving Office", which may be a national or regional patent office, or the IB. The Receiving Offices – of which there were 112 in 2009 – are responsible for recording PCT applications, examining their compliance with PCT requirements, and transmitting them to the IB for further processing.

3.1 Top 15 Receiving Offices

Table 3.1 presents PCT filings by the top 15 Receiving Offices for 2005-2009. In principle, a PCT application is filed at the national patent office of the applicant's home country or at a regional patent office acting for the applicant's home jurisdiction. This means that filing statistics by country and by office are in many cases similar (compare Table 1.2 with Table 3.1). Nonetheless, where inter-office agreements exist, a PCT application can be filed with a patent office other than the applicant's home office. The IB is a competent Receiving Office for applicants from all PCT Contracting States.

Table 3.1. PCT Filings by Receiving Office, 2005 – 2009

Receiving Offices	2005	2006	2007	2008	2009	2009 Share (%)	compared to 2008 (%)
United States of America	47,240	51,860	54,601	52,059	46,490	29.8	-10.7
Japan	24,290	26,421	26,935	28,027	29,291	18.8	4.5
European Patent Office	21,254	23,383	26,064	29,492	27,336	17.5	-7.3
International Bureau	7,944	8,694	9,189	9,051	8,727	5.6	-3.6
Republic of Korea	4,690	5,918	7,060	7,911	8,026	5.1	1.5
China	2,437	3,827	5,400	6,082	8,000	5.1	31.5
United Kingdom	5,171	5,188	5,548	5,271	4,893	3.1	-7.2
France	3,923	3,862	3,812	3,805	3,770	2.4	-0.9
Sweden	2,050	2,123	2,249	2,318	2,045	1.3	-11.8
Germany	2,325	2,329	2,308	2,189	1,954	1.3	-10.7
Canada	1,974	2,143	2,370	2,299	1,895	1.2	-17.6
Australia	1,978	2,012	2,004	1,921	1,710	1.1	-11.0
Spain	898	924	985	1,052	1,244	0.8	18.3
Israel	1,401	1,512	1,631	1,704	1,238	0.8	-27.3
Finland	1,056	1,014	1,028	943	1,157	0.7	22.7
All others	8,122	8,459	8,765	9,119	8,124	5.2	-10.9
Total	136,753	149,669	159,949	163,243	155,900	100	-4.5

Source: WIPO Statistics Database

> There is great variation in the number of PCT applications received by the top 15 Receiving Offices. Six of them received fewer than 2,000 PCT applications in 2009, while the top 3 collectively received over 100,000, accounting for two-thirds of total PCT filings. The top 10 Receiving Offices accounted for 90% of all PCT applications filed in 2009.

> Consistent with the overall drop in the number of PCT filings in 2009, 10 of the top 15 Receiving Offices showed declines from 2008 levels. The remaining 5 offices, however, showed increases, with China recording the highest growth of 31.5%.

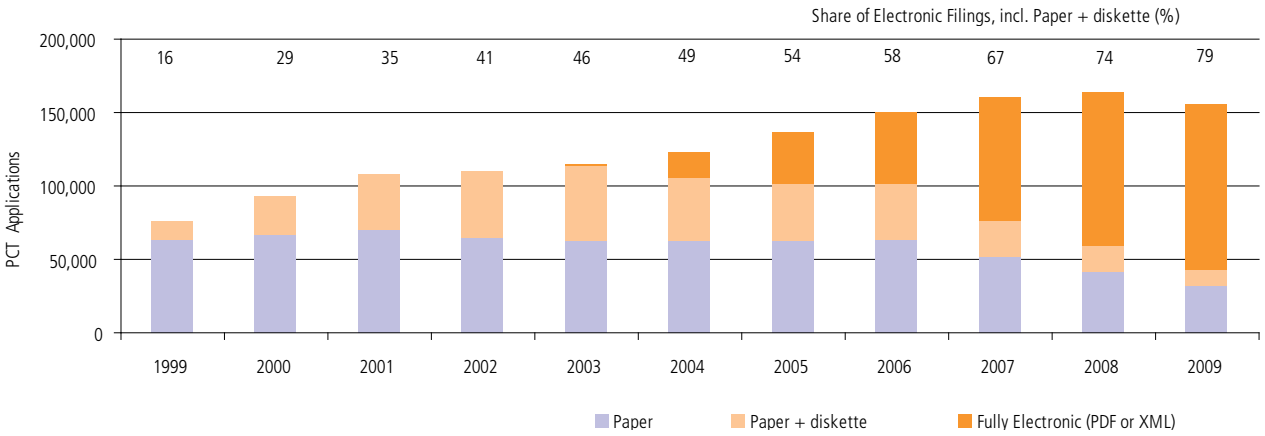
International Bureau

In addition to its role as Receiving Office, the IB is responsible for certain functions in the international phase of the PCT System. The most important are formality examination, translation of abstracts and patentability reports, and publication of PCT applications. These tasks are performed by WIPO's PCT Operations Division.

4.1 Filings by Medium of Filing

A PCT applicant can choose to file using different methods and formats. The three filing methods available are: (i) filing on paper; (ii) filing on paper along with a diskette or other digital storage medium, such as a CD or DVD, with the application being prepared electronically using the WIPO-provided software; and (iii) using fully electronic media in different formats, such as PDF or XML. Filing electronically offers benefits to both applicants and patent offices. To encourage their use, the PCT provides a fee reduction for electronic filing.

Figure 4.1. PCT Filings by Method of Filing, 1999 – 2009



Source: WIPO Statistics Database

> Launched on January 1, 1999, paper plus diskette filing was immediately taken up by PCT applicants; with 16% of applications that year filed using the new method. Five years later, in 2003, this filing method reached its peak, accounting for 46% of total filings. Starting in 2004, the fully electronic filing media (PDF or XML) were introduced, leading to a rapid decrease in the use of paper plus diskette filing.

> In 2009, a decade after the first introduction of (partially) electronic PCT filing, 72% of PCT applications were submitted using fully electronic media. Adding paper plus diskette filings to this figure, 79% of PCT applications were filed in electronic form.

4.2 Electronic Processing of PCT Applications by the IB

The main developments in 2009 that affected the electronic processing of PCT applications at the IB are:

> The complete decommissioning by the IB of its legacy mainframe bibliographic data management systems (CASPIA/CASPRO), which had existed for almost 20 years. The legacy publication management system (SPIDI), in use since 1998, was also decommissioned. The IB's processing and publication of files is now based entirely on its new IT platform. That platform, eDossier, is a fully integrated system capable of handling all 10 PCT publication languages, including those based on non-Latin scripts. This is an important milestone for the IB and is the culmination of many years of work. While this is essentially an internal change not directly visible to PCT users, the new system will provide a foundation for further efficiency gains and a wider range of services for applicants in the years to come.

> In 2008, the IB began sending advance electronic copies of PCT notifications by e-mail to applicants who requested that service. In 2009, approximately 205,000 such electronic notifications were transmitted by the IB to approximately 12,300 distinct e-mail addresses.

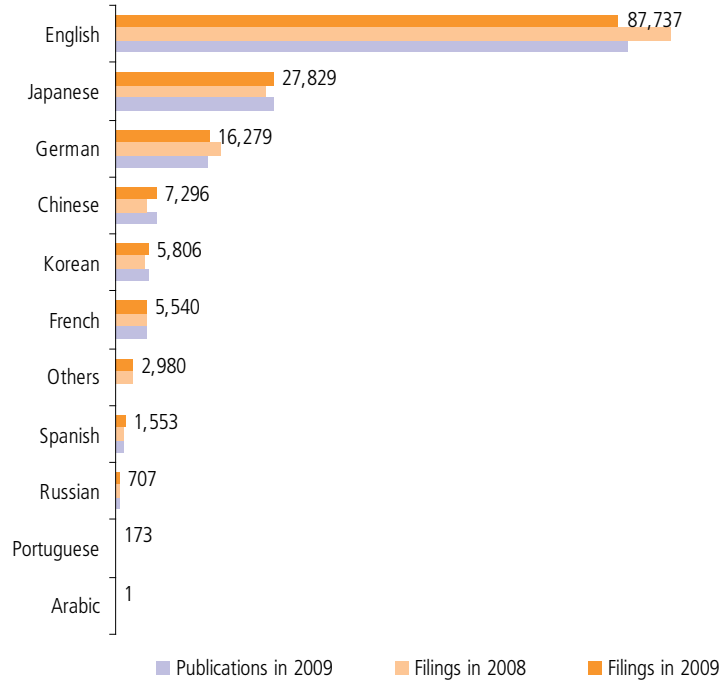
> In 2009, the IB conducted a pilot program allowing applicants to submit post-filing documents relating to their PCT applications in electronic form by uploading them via a web interface. Following the pilot program, the system will become operational in 2010.

> Electronic processing of applications led to further developments of the PATENTSCOPE® search service, such as the post-publication of PCT-related documents or further full-text searches in XML (See paragraphs 7.1 and 7.2 for further details).

4.3 Languages of Filing and Publication

Figure 4.3 below shows the number of PCT applications according to language of filing and publication. A PCT application may be filed in any language accepted by the relevant Receiving Office, but must be published in one of the 10 official publication languages – namely, Arabic, Chinese, English, French, German, Japanese, Russian and Spanish, as well as Korean and Portuguese for PCT applications filed on or after January 1, 2009.

Figure 4.3. Distribution of Filing and Publication Languages, 2009



Source: WIPO Statistics Database

> Despite a decrease of almost 10%, English remained the main language of filing (56% of total) as well as publication (58% of total) in 2009.

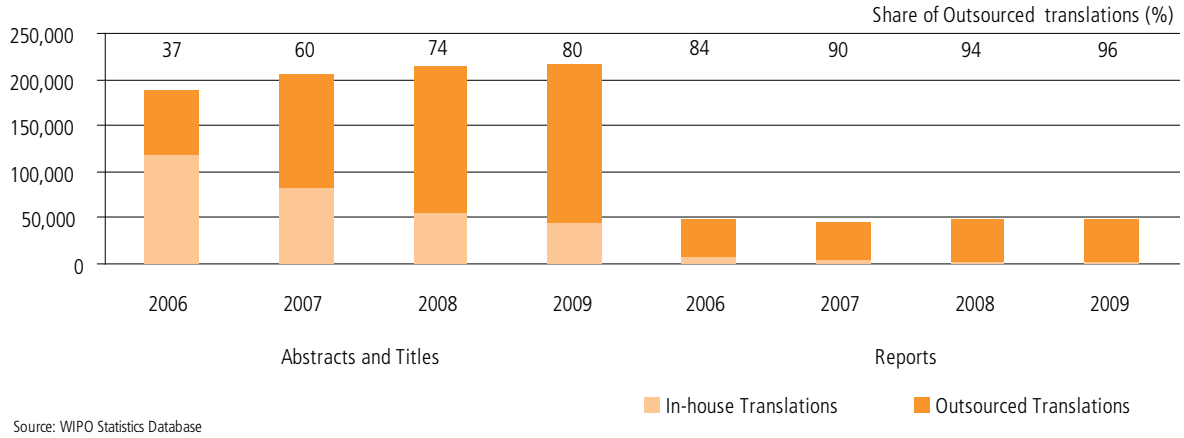
> Chinese (+33% over 2008) and Korean (+16% over 2008) remained the two fastest growing filing languages in 2009.

4.4 Translation

The goal of the IB's translation work is 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 that objective, the IB translates all abstracts and titles of PCT applications into English and French, and all reports (ISR, SISR, IPRP) into English.

The IB started outsourcing translation work in 2006. The great majority of all translations are now outsourced (see Figure 4.4), a process involving numerous translation agencies and external translators.

Figure 4.4. Distribution of Translation Work, 2006 - 2009



Source: WIPO Statistics Database

> About 80% of titles and abstracts and 96% of reports were outsourced in 2009.

> With about 216,000 translations in 2009, the number of abstracts and titles translated has slightly increased in 2009 compared to the previous year, despite a decrease in filings (-4.5%) and in publications (-3.4%). This reflects special efforts by the IB to ensure timely translation.

4.5 Terminology

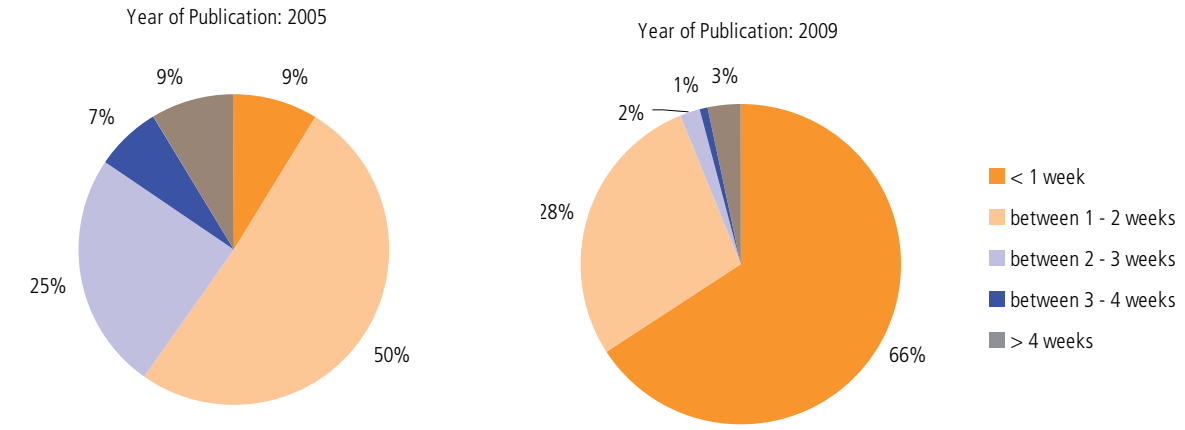
In 2009 the IB continued to develop terminology databases aimed at improving the quality of internal and external translations and supporting cross-language information retrieval in the PATENTSCOPE® search service.

To improve cross-language information retrieval, in 2009 the IB developed a new functionality for its PATENTSCOPE® search service to help reduce the language barrier when searching patent applications. It is now possible to enter search keywords in Chinese, English, French, German, Japanese, Portuguese or Spanish and to obtain an expanded query containing additional keywords in the other supported languages, improving the recall of the searches as a result. Users will be able to consult the titles and abstracts of the results in their search language using machine translation. The new functions are expected to be made available to the public in the course of 2010.

4.6 Publication Timeliness

The PCT provides that PCT applications and related documents shall 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 4.6 depicts the actual timeliness of publication after the expiration of the 18-month period.

Figure 4.6. Timeliness of publishing PCT applications, 2005 and 2009



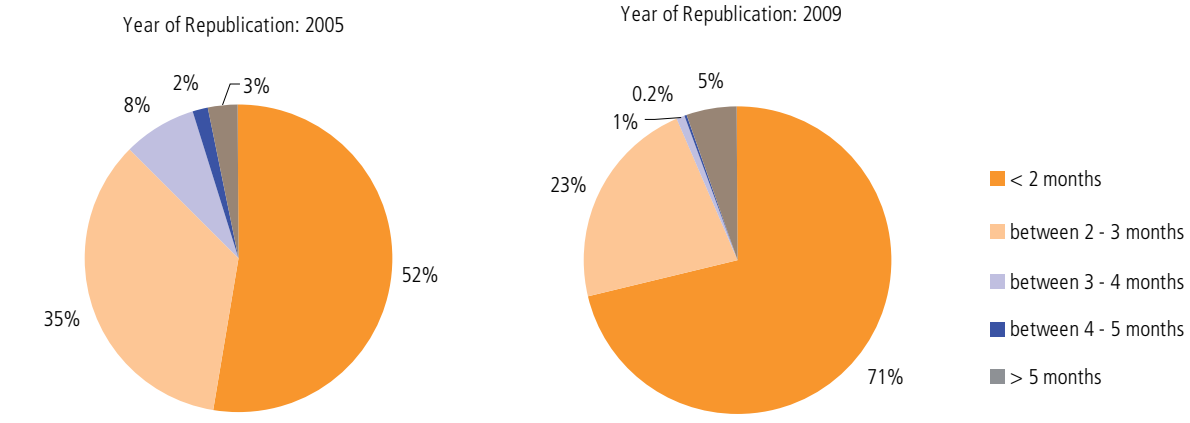
Source: WIPO Statistics Database

> In 2009, 94% of PCT applications were published within two weeks following the expiration of 18 months from the priority date, and 96% were published within three weeks. This represents a significant improvement over 2005, when 59% of PCT applications were published within two weeks and 84% within three weeks.

4.7 Republication Timeliness

The IB publishes PCT applications even in the absence of an ISR. In such a case, the PCT application is republished along with the ISR after the latter is received. Figure 4.7 shows the timeliness of republication by the IB of PCT applications with ISRs.

Figure 4.7. Timeliness of republishing PCT applications with their ISRs, 2005 and 2009



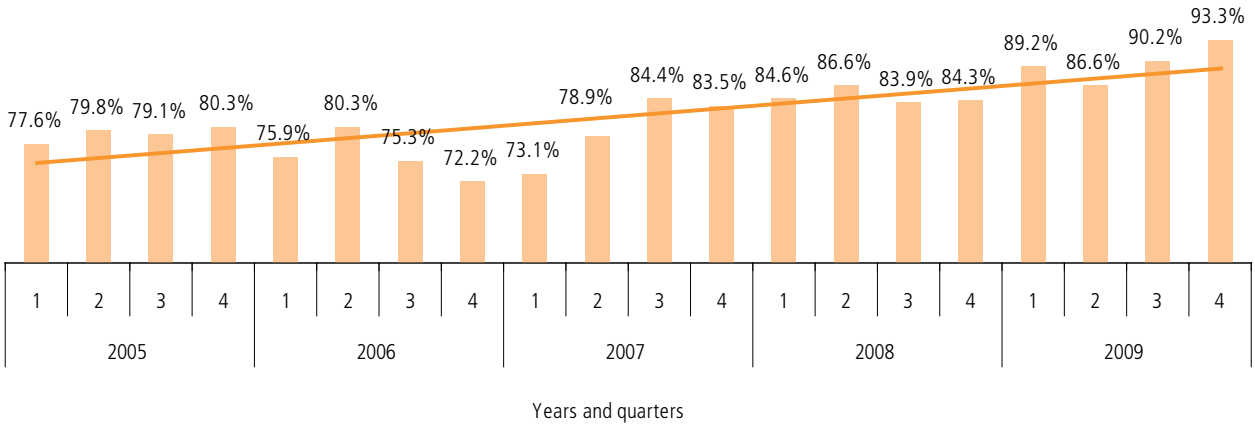
Source: WIPO Statistics Database

> In 2009, 71% of republications took place within two months of the IB receiving the ISR and 94% within three months. Again, this represents a significant improvement over 2005, when 52% of republications occurred within two months and 87% within three months.

4.8 Quality

In order to measure the quality of the formality examination performed by the PCT Operations Division in a simple and comprehensive way, an aggregate quality index has been developed, and is calculated as the simple average of four lead quality indicators. Three of these indicators are based on the timeliness of key transactions in the PCT system: acknowledgement of receipt of the PCT application, publication and republication. The fourth indicator reflects the number of republications due to corrections of entries in bibliographical data.[13]

Figure 4.8. Quality Index of Formality Examination, 2005 - 2009



Source: WIPO Statistics Database

> Since 2005, quality as measured by the aggregate index has markedly improved, reaching a level of 93.3% in the final quarter of 2009.

[13] Formally, the quality index is the simple average of: (i) percentage of forms PCT/IB/301 ("Notification of receipt of a PCT Application") sent up to 5 weeks after the IB receives an application; (ii) percentage of PCT applications published up to 6 months and 3 weeks after the international filing date; (iii) percentage of later publications of ISRs within 2 months after the IB receives the ISR; and (iv) percentage of "R5 republications", i.e., corrections in Section I of the PCT application.

4.9 Productivity

The IB's productivity in processing PCT applications can be measured by the processing unit cost, defined as the average total cost of publishing a PCT application. Average total cost is determined by total PCT expenditure, plus a certain share of expenditure on support and management activities.[14] The unit cost thus includes the cost of all PCT activities, including translation, communication, management and others.[15]

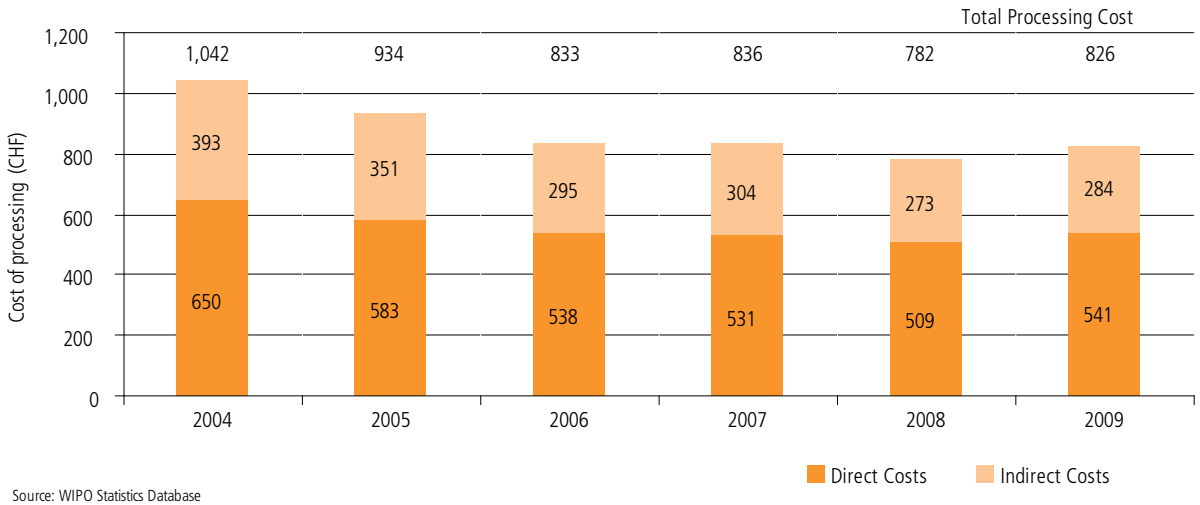
In computing unit cost, the production cost consists of two parts: direct and indirect cost. Direct cost corresponds to the expenditure incurred by the PCT Operations Division (for administration of the PCT system and programs). Indirect cost includes expenditure for supporting units (e.g., building, information technology, others). The latter expenditures are weighted to take into account only the share attributable to the PCT System. The cost of storing published applications is added to unit costs since the PCT System must store applications for 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 4.9 depicts the evolution of processing unit cost from 2004 to 2009, including a breakdown of the contribution of direct and indirect costs.

Figure 4.9. The Unit Cost of PCT Processing, 2004-2009



Source: WIPO Statistics Database

> In 2009, the unit cost per PCT publication is estimated at 826 Swiss francs (CHF), which represents a decrease of 21% since 2004.

> The slight increase, compared to 2008, can be explained by the decrease in the number of PCT applications published by the IB in 2009 (-3.4%) without an immediate commensurate decrease in the total cost of production.

[14] The complete methodology is available at *http://www.wipo.int/edocs/mdocs/govbody/en/a_42/a_42_10-annex3.pdf*.

[15] Since January 2010, the number of PCT applications published is determined based on the actual publication date instead of the year indicated in the publication number. As a consequence, processing costs have slightly changed compared to previous editions of the PCT Yearly Review.

International Searching Authorities

Each PCT application must undergo an international search carried out by one of the International Searching Authorities (ISA). Receiving Offices have agreements with at least one but sometimes several ISAs for carrying out international searches. Where a Receiving Office has an agreement with multiple ISAs, the PCT applicant must select one of them.

Once the ISA has performed the search, the applicant will receive an International Search Report (ISR) that contains a list of documents relevant for assessing the patentability of the invention. In addition, the ISA establishes a written opinion containing a detailed analysis of the patentability of the invention.

5.1 Distribution by ISA

Table 5.1 shows the distribution of search reports issued by all ISAs from 2005 to 2009. Appointed under the PCT in October 2007, the National Institute of Industrial Property (Brazil) began functioning as an ISA and IPEA on August 7, 2009, bringing the number of national offices or intergovernmental organizations acting as ISAs and IPEAs to 14. The offices of Egypt, India and Israel, which all have been appointed, have not yet notified the date on which they will start functioning as ISAs and IPEAs.

Table 5.1. Distribution of ISRs by ISA, 2005 - 2009

International Searching Authorities	Year 2005	2006	2007	2008	2009	2009 Share (%)
Australia	2,735	2,754	2,811	2,755	2,666	1.7
Austria	916	1,097	1,171	1,191	1,544	1.0
Brazil					67	0.0
Canada	2,107	2,317	2,528	2,477	2,065	1.3
China	2,484	3,892	5,492	6,188	8,146	5.2
European Patent Office	67,118	71,528	75,409	77,909	70,232	45.0
Finland	426	642	718	660	865	0.6
Japan	23,020	25,146	25,947	27,117	28,613	18.4
Nordic Patent Institute				102	240	0.2
Republic of Korea	4,230	6,673	10,238	19,014	21,755	14.0
Russian Federation	723	806	855	895	785	0.5
Spain	987	1,064	1,142	1,201	1,358	0.9
Sweden	3,377	3,191	3,132	2,339	2,050	1.3
United States of America	28,621	30,551	30,504	21,387	15,514	10.0
Total	136,744	149,661	159,947	163,235	155,900	100

Source: WIPO Statistics Database

> The EPO is designated as a competent ISA by most Receiving Offices. In recent years, it has accounted, by far, for the largest share of ISRs.

> The Korean Intellectual Property Office (KIPO) is increasingly used notably by applicants from the US. By 2009, over 60% of searches carried out by KIPO were done for applicants from the US. In comparison, only 34% of searches were carried out for its own applicants. In contrast, the search workload of the USPTO has gradually decreased over the past two years. In 2009, only 30% of US applicants selected the USPTO as the ISA, with 30% of applicants selecting KIPO and the remaining 40% opting for the EPO.

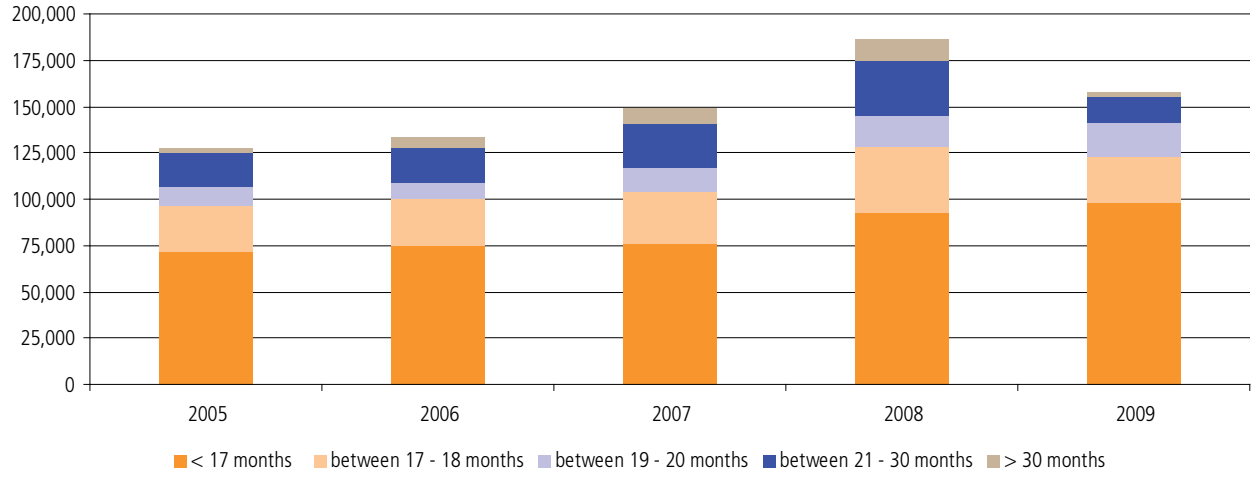
5.2 Timeliness in transmitting ISRs

In order to ensure that the ISR is published with the corresponding PCT application, the PCT rules set a time limit for establishing the ISR: three months from receipt of the application by the ISA or nine months from the priority date, whichever time limit expires later.

In practice, since the technical preparation for publishing a PCT application takes approximately one month and should finish 15 days before the publication date, the establishment of the ISR within 16 months from the priority date still allows the IB to publish the ISR with the application document. ISRs received at IB after technical preparation of the PCT applications they relate to are published separately later.

Figure 5.2a presents information on timeliness in transmitting ISRs to the IB. Timeliness is measured using the transmittal dates recorded in the ISR and thus does not take into account a possible postal delay.

Figure 5.2a. Timeliness in Transmitting ISRs, 2005 - 2009

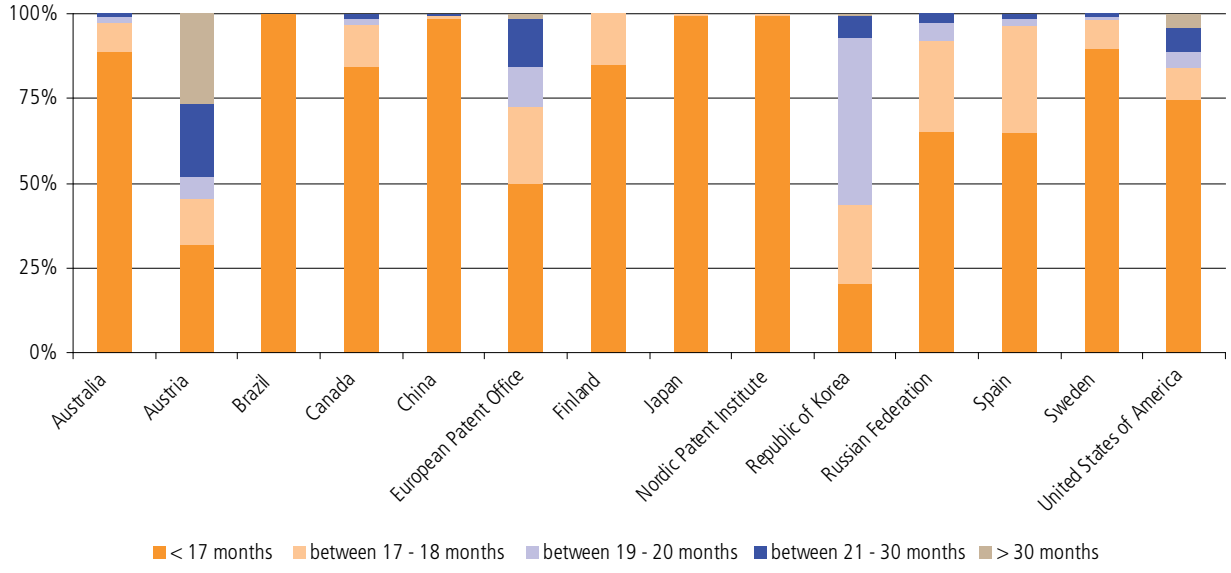


Source: WIPO Statistics Database

> Overall, about 62% of ISRs were established within the 16-month time limit. A significant number of search reports were established after the publication of the PCT application, implying separate and late publication of the search report.

Figure 5.2b presents the same timeliness information for 2009, but gives a breakdown by ISA.

Figure 5.2b. Timeliness in Transmitting ISRs by ISA in 2009



Source: WIPO Statistics Database

- Heavy workload may be a contributor to the late establishment of search reports. In the case of the EPO and the KIPO, 27% and 56%, respectively, of ISRs were established after the publication of the PCT application, resulting in late publication of a considerable number of search reports.

- The JPO, in contrast, established a high percentage of ISRs within the 16-month time limit, showing that factors other than workload (the JPO having a workload comparable to that of the above-mentioned offices) are relevant in explaining ISR timeliness.

5.3 Distribution by SISA

As of January 1, 2009, the Supplementary International Search (SIS) service allows PCT applicants to request searches in additional languages, in addition to the searches performed by the applicant's "usual" ISA. In 2009, three Authorities specified for Supplementary Search (SISA) offered this service: the Federal Service for Intellectual Property, Patents and Trademarks of the Russian Federation, the Swedish Patent and Registration Office and the Nordic Patent Institute.

Possibly because of the limited number of SISAs, demand for Supplementary International Search Reports (SISR) has been limited. In 2009, there were only 24 valid requests for SIS, 22 of which were filed with the Federal Service for Intellectual Property, Patents and Trademarks of the Russian Federation and 2 with the Swedish Patent and Registration Office.

International Preliminary examining Authorities

PCT applicants can optionally request an International Preliminary Examination (IPE), by filing what is known as a Chapter II Demand with a competent International Preliminary Examining Authorities (IPEA). The selection of a competent IPEA is based on negotiated agreements between Receiving Offices and IPEAs. Once the preliminary examination has been carried out, an International Preliminary Report on Patentability (IPRP) is sent to the applicant, who can then make a better informed decision on whether or not to enter the PCT national phase. The report is also transmitted to all national offices in their capacity of "elected" office.[16] National offices, in examining the PCT application during the national phase, can take into account the IPRP when considering the patentability of the underlying invention.

6.1 Distribution by IPEA

Table 6.1 shows the distribution of IPRPs issued by all IPEAs from 2005 to 2009. As noted in Section 5.1, the National Institute of Industrial Property (Brazil) began functioning as an IPEA on August 7, 2009. The offices of Egypt, India and Israel, have not yet notified the date on which they will start functioning as IPEAs.

Table 6.1. Distribution of IPRPs by IPEA, 2005-2009

International Preliminary Examining Authority	Year					2009 Share (%)
	2005	2006	2007	2008	2009	
Australia	1,035	970	872	865	784	5.2
Austria	160	114	100	103	68	0.5
Brazil					0	0.0
Canada	328	431	413	479	282	1.9
China	436	364	385	419	300	2.0
European Patent Office	13,878	11,611	10,608	9,872	8,532	56.9
Finland	4	125	151	154	144	1.0
Japan	2,526	2,580	2,556	2,123	2,143	14.3
Nordic Patent Institute					25	0.2
Republic of Korea	652	598	511	361	341	2.3
Russian Federation	138	114	121	97	66	0.4
Spain	128	111	125	107	142	0.9
Sweden	986	686	666	620	463	3.1
United States of America	5,542	3,873	2,944	2,884	1,716	11.4
Total	25,813	21,577	19,452	18,084	15,006	100

Source: WIPO Statistics Database

> The number of requests for IPE received in 2009 fell by 41.9% compared to five years ago. Since 2004, a written opinion outlining the search examiner's verdict on the patentability of the subject matter has accompanied each ISR. The need to request further preliminary examination has therefore diminished.

> The EPO acts as a competent IPEA for most Receiving Offices and carried out the largest share of preliminary examinations in 2009.

[16] "Elected" offices are national (or regional) offices at which the applicant intends to use the results of the international preliminary examination.

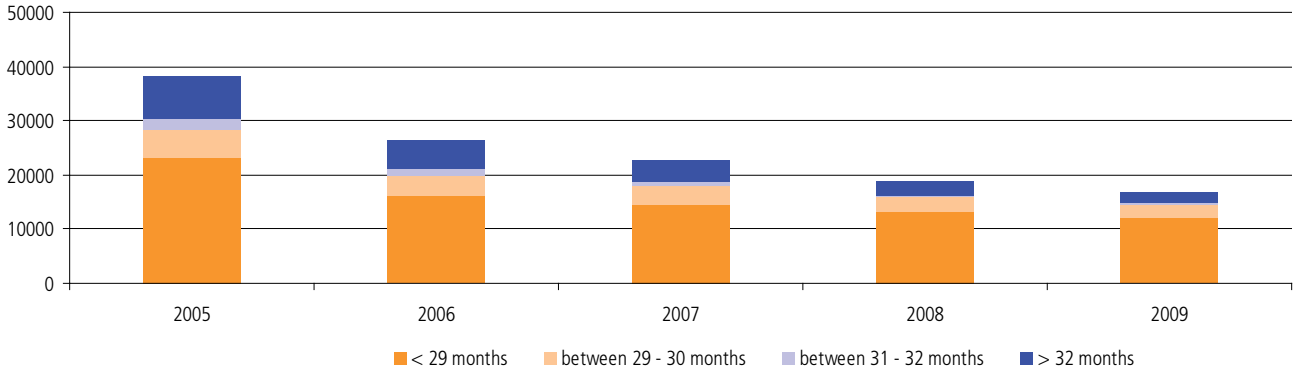
6.2 Timeliness in transmitting IPRPs

Similar to the establishment of search reports, the PCT rules 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 last.

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 therefore leaves applicants one month to decide on PCT national phase entry.

Figure 6.2a presents information on timeliness in transmitting IPRPs to the IB. Timeliness here is measured using the date the IB receives reports, rather than the date the reports were established. The measurement may thus be influenced by transmittal delays.

Figure 6.2a. Timeliness in transmitting IPRPs, 2005-2009

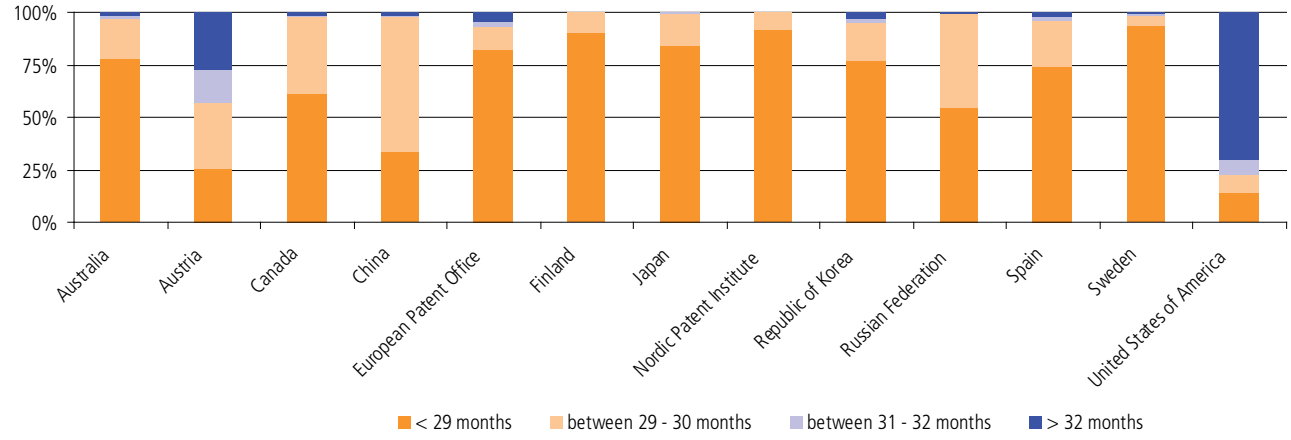


Source: WIPO Statistics Database

> Timeliness in transmitting IPRPs has improved over the past five years. Around 71% of examination reports were transmitted within 28 months from the priority date, compared to only 60% in 2005.

Figure 6.2b presents the same timeliness information (for 2009), but offers a breakdown by IPEA.

Figure 6.2b. Timeliness in transmitting IPRPs by IPEA, 2009



Source: WIPO Statistics Database

> There does not appear to be a clear relationship between office workload and timeliness in transmitting IPRPs. In particular, the two offices carrying out the most IPRP – the EPO and the JPO – established the majority of reports within 30 months from the priority date.

SECTION C – WIPO'S PATENT INFORMATION SERVICE

7.1 PATENTSCOPE® Search Service

Launch of Full Online File Inspection. WIPO launched full public online file inspection, via the PATENTSCOPE® search service, of all published PCT applications filed on or after January 1, 2009. Most of the file contents of applications are now available online free of charge, with the exception of certain documents that the PCT does not allow to be made available. Although a number of documents were already accessible via the search service, all correspondence sent to and from the applicant, and all notifications/forms issued by the IB, and by other international authorities where available to the IB, may now also be consulted, with the exception mentioned above of certain confidential documents/correspondence.

New PCT Application Status Report. A new PCT application Status Report, available online through the PATENTSCOPE® search service, shows the IB's latest records of status information and bibliographic data for published PCT applications filed from July 1998 onwards. Intended for applicants, Designated/Elected Offices and third parties, the Status Report contains the latest bibliographic data; the most important status dates; information about certain withdrawals; the title and abstract in all available languages; and information on the ISR, the IPRP and any SISR.

Removal of Address Data. In response to privacy concerns and apparent abuses of PCT user data, the address data for individual applicants and inventors has been removed from the PATENTSCOPE® search service. As a result, personal address data should no longer be indexed or displayed by Internet search engines.

Full-Text Search available in Korean and English for PCT Applications filed in XML Format. As from July 2, 2009, the PATENTSCOPE® search service began supporting keyword searches in Korean and English where PCT applications are filed electronically in XML format with KIPO as Receiving Office, in Korean or English, and with the JPO as Receiving Office, in English. Full-text searches were already possible for PCT applications in English, French, German, Japanese, Russian and Spanish.

New PCT National Phase Information. The PATENTSCOPE® search service added PCT national phase information (i.e., information on whether a PCT application has entered the national phase and other information relating to the national phase) for the African Regional Intellectual Property Organization (ARIPO), the Eurasian Patent Organization (EAPO), Belarus, Hungary, Malaysia, Singapore and Viet Nam, bringing the total number of offices that furnish such information to 43.

Availability of National Patent Collections. National and regional patent collections are available for public searching in a test format.[17] These collections allow users to search not only the PCT database of approximately 1.7 million PCT applications, but also the patent collections of ARIPO, Cuba, Israel, Mexico, the Republic of Korea, Singapore, South Africa and Viet Nam. Special feature include flexible search syntax, automatic word stemming and relevance ranking, as well as graphical results. Existing collections will be enhanced and patent collections from other offices will be added as they become available.

New Interface in Japanese. The PATENTSCOPE® search service interface is now available in Japanese – in addition to English, French and Spanish – at *http://www.wipo.int/pctdb/ja/* and *http://www.wipo.int/patentscope/ja/dbsearch/*. The web pages in Japanese include the search interface, search results, search help and important supporting pages.

[17] See *http://www.wipo.int/patentscope/search/en/search.jsf*

7.2 New Internet Resources for PCT Users

Since January 2009, in addition to the regular updating of existing materials, the following new resources are available to PCT users:

PCT Distance Learning Course. WIPO's first distance learning course on the PCT, "Introduction to the Patent Cooperation Treaty (PCT)", is a self-study course developed by WIPO PCT specialists aimed at anyone seeking a basic understanding of the PCT System. It is available free of charge at *http://academy.wipo.int/training*.

PCT Webinars. In February 2009, WIPO broadcast its first webinar (live presentation via the Internet) on the PCT in English. Further webinars were given in 2009 in Chinese, English, Japanese, Russian and Spanish, including some on filing PCT applications electronically using the PCT-SAFE software.

Fully Hyperlinked Tables. The table of PCT Reservations, Declarations, Notifications and Incompatibilities was updated and made available in English, French, German, Russian and Spanish as a fully hyperlinked resource with references to all relevant PCT Articles, Rules and Sections of the Administrative Instructions. The table of Power of Attorney Waivers is also now available in fully hyperlinked format, including in French and Russian.

PCT Case Law Database. A new database of text-searchable legal and administrative decisions from national courts and regional administrative bodies in or operating for PCT Contracting States is available at *http://www.wipo.int/pctcaselawdb/en*. The decisions included in the database are ones in which PCT issues have been referenced, raised or considered by a national court or administrative body. Abstracts and PCT legal references have been added by the IB in order to facilitate navigation and information retrieval. The database will be updated and expanded as additional resources become available.

7.3 Aggregate Patent Statistics

WIPO aims to provide a more comprehensive coverage of statistics in various fields of intellectual property.[18] Evolving from the *2008 World Patent Report*, the first World Intellectual Property Indicators (WIPI) report, published in 2009, was based on 2008 statistical data. In addition to patents, the WIPI also covers utility models, trademarks and industrial designs.

In an effort to provide readers access to PCT statistical publications in different languages, the PCT Monthly Statistics Report is now available in French.

[18] See *http://www.wipo.int/ipstats/en/*

SECTION D – DEVELOPMENTS RELATED TO THE PCT

8.1 Amendments entering into Force in 2009

PCT Rule 45bis ("Supplementary International Searches") was adopted by the PCT Assembly in September 2007 and entered into force on January 1, 2009. It provides for the operation of a new optional PCT supplementary international search (SIS) service, available to all applicants, allowing additional language-based searches to be performed during the international phase in addition to the search prepared by the applicant's "usual" ISA. The system is intended to provide a more complete overview of the prior art in the international phase.

During the course of the meeting of that Assembly, two more languages, Korean and Portuguese, were included as "languages of publication" under PCT Rule 48.3, in respect of PCT applications with international filing dates on or after January 1, 2009. Now that PCT applications are published in 10 languages – Arabic, Chinese, English, French, German, Japanese, Korean, Portuguese, Russian and Spanish – applications filed in any of those languages do not need to be translated for the purpose of publication.

Further amendments that had been adopted by the PCT Assembly in September 2008 entered into force on January 1, 2009. They include:

(a) the right of agents to practice before any international authority specified to carry out a SIS (PCT Rules 90.1, 90.4 and 90.5);
(b) the effects of a withdrawal of a request for SIS (PCT Rules 90bis.3bis, 90bis.5 and 90bis.6); and
(c) a clarification concerning the refund of the supplementary search fee and the supplementary search handling fee (PCT Rules 45bis.2 and 45bis.3).

Two amendments to the PCT Regulations adopted by the PCT Assembly entered into force on July 1, 2009:

(a) when filing amendments to claims under PCT Articles 19 and/or 34, a new requirement that applicants must submit a complete set of claims rather than, as was previously the case, replacement sheets for only those claims that differ from sheets previously filed (see amended PCT Rules 46.5, 66.8 and 70.16); and
(b) a clarification regarding the procedure to be followed by the Receiving Office where it has accorded, albeit mistakenly, an international filing date and intends to issue a declaration under PCT Article 14(4) that the PCT application be considered withdrawn (PCT Rule 29.4).

8.2 Other Developments in 2009

International Search, Supplementary International Search and International Preliminary Examination. The National Institute of Industrial Property (Brazil), appointed under the PCT in October 2007, began functioning as an ISA and an IPEA with effect from August 7, 2009, thus bringing the number of national offices or intergovernmental organizations acting as ISAs and IPEAs to 14. In September 2009, the Assembly of the PCT Union appointed the Egyptian Patent Office and the Israel Patent Office as ISAs and IPEAs, to be effective from dates to be notified by the respective offices when they are ready to begin operations.

The SIS service started on January 1, 2009. At that time, the Federal Service for Intellectual Property, Patents and Trademarks of the Russian Federation, the Swedish Patent and Registration Office and the Nordic Patent Institute began offering the service and, in November 2009, the National Board of Patents and Registration of Finland notified the IB that, with effect from January 1, 2010, it would also function as an SISA.

Modifications to the Administrative Instructions under the PCT relating to Sequence Listings. With effect from July 1, 2009, a number of modifications were made to the Administrative Instructions in relation, in particular, to the filing of nucleotide and/or amino acid sequence listings. As a result of those modifications, mixed mode sequence listing filings (both on an electronic medium in electronic form and on paper) are no longer possible, and there will no longer be a page fee for sequence listings filed in accordance with Annex C/WIPO Standard ST.25 text format as part of a PCT application filed in electronic form. However, full page fees are now payable for all pages of a sequence listing filed in image format or on paper, and page fees now have to be paid for tables relating to sequence listings, whether filed on paper or electronically.

8.3 Changes in 2010

Amendments adopted by the PCT Assembly in September 2009, which will enter into force on July 1, 2010, concern:

(a) clarification of the extent to which SISAs may define the scope of the SIS to be offered) (PCT Rule 45bis.9);
(b) the form of amendments (requiring applicants to indicate the basis for amendments in the application filed) (PCT Rules 46.5, 66.8 and 70.2);
(c) the process for establishing equivalent amounts of certain PCT fees in different currencies (PCT Rules 15.2, 16.1, 57.2). Corresponding changes were also made to the Directives of the PCT Assembly and approved for the agreements between the IB and the ISAs and IPEAs.

8.4 Meetings other than the PCT Assembly held in 2009

During the **Meeting of International Authorities under the PCT**, held in Seoul, Republic of Korea, from March 16 to 18, 2009, support was given for the following:

(a) where an office establishes an ISR in its role as ISA the same search should not be repeated in the national phase in its role as designated office;
(b) increasing the usefulness of international preliminary examination by introducing top-up searches and ensuring that at least one written opinion and further opportunity for response is offered under Chapter II proceedings; and
(c) introducing a system permitting third party observations to be made in the international phase.

The second session of the **PCT Working Group** was held in Geneva from May 4 to 8, 2009. The Working Group addressed a broad range of topics, as well as various proposals for future development of the PCT system, including a draft roadmap by the IB for improving PCT use within the existing legal framework, as well as proposals from Japan, the Republic of Korea and the United States of America for improving international search and preliminary examination by making various changes to the timing and methodology of those processes. The Working Group also discussed eligibility criteria for reductions in certain PCT fees and requested the IB to present further studies, including on possible fee reductions for small and medium-sized enterprises and universities.

8.5 Non-legal Developments

Pilot Patent Prosecution Highway (PPH) Program to use PCT Work Products. On November 13, 2009, the Trilateral Offices (EPO, JPO, USPTO) agreed to expand the existing set of bilateral PPH worksharing arrangements by starting a PCT/PPH pilot program. Under this program, PCT work products established by one of the Trilateral Offices in its capacity as ISA or IPEA (namely, positive written opinions and international preliminary examination reports) may form the basis for PPH requests in each of the Trilateral Offices during national phase processing of PCT applications. The pilot program started on January 29, 2010.

8.6 PCT Training

In 2009, the IB organized and participated in 133 PCT promotional activities in the following (40) countries: Bahrain, Belgium, Bosnia and Herzegovina, Botswana, Canada, Chile, China, Costa Rica, Côte d'Ivoire, Cuba, Congo, Denmark, Dominican Republic, El Salvador, Finland, France, Germany, Honduras, Indonesia, Israel, Italy, Japan, Kenya, Namibia, Netherlands, Nicaragua, Nigeria, Peru, Philippines, Republic of Korea, Singapore, Slovakia, South Africa, Spain, Sweden, Switzerland, Thailand, United Kingdom, United States of America and Zambia.

The activities were presented in Chinese, English, French, Spanish, German, Hebrew and Japanese.

ANNEXES

STATISTICAL SOURCES

The statistics in this Yearly Review are based on two main data sources. For the international phase of the PCT System, data are drawn from the WIPO statistical database. Estimates have been made due to the fact that WIPO will continue to receive PCT applications filed in 2009 after the publication of this Review.

For the national phase of the PCT System, statistics are based on data supplied to WIPO by national and regional patent offices, which WIPO receives often 6 months or more after the end of the year concerned. The latest available year to date is therefore 2008. In some cases, PCT national phase entry data provided by the PATENTSCOPE® search service have been used. Data may be missing for some offices or may be incomplete for some countries of origin. Missing data are estimated by WIPO in the case of Figure 2.1 by using simple extrapolations of past trends.

The figures shown in this review are subject to change.[19]

[19] Regular updates are made at *http://www.wipo.int/ipstats/en/*

STATISTICAL TABLE

The table below shows the number of PCT applications filed in 2009 and the number of PCT national phase entries in 2008 by office and by country (or territory) of origin. Estimates have been made for PCT applications in the international phase. The figures shown in this table are thus subject to change.[20]

A PCT applicant seeking protection in any of the EPC Member States can generally choose between entering the national phase at the relevant national office or at the EPO.[21] 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 EPC Member States (see "PCT Contracting States"). A PCT applicant seeking protection in those countries must enter the PCT national phase at the EPO.

The following example may help in understanding the table below: the Australian Patent Office received 1,710 PCT applications in 2009 and 20,523 PCT national phase entries in 2008, whereas applicants residing in Australia accounted, worldwide, for 1,754 PCT applications in 2009 and 6,490 PCT national phase entries in 2008.

Name	Code	PCT International Phase Filings in 2009		PCT National Phase Entries in 2008	
		At Receiving Office	By Country of Origin	At Designated / Elected Office	By Country of Origin
African Intellectual Property Organization	OA	3	n.a.	—	n.a.
African Regional Intellectual Property Organization	AP	1	n.a.	410	n.a.
Albania	AL	0	0	—	1
Algeria	DZ	7	8	—	0
Andorra	AD	n.a.	2	n.a.	5
Antigua and Barbuda	AG	0	5	—	5
Argentina	AR	n.a.	11	n.a.	76
Armenia	AM	2	5	2	2
Australia	AU	1,710	1,754	20,523	6,490
Austria	AT	492	1,029	—	2,758
Azerbaijan	AZ	4	3	—	25
Bahamas	BS	n.a.	22	n.a.	65
Bahrain	BH	0	1	—	0
Bangladesh	BD	n.a.	1	n.a.	0
Barbados	BB	IB	92	—	618
Belarus	BY	11	19	—	13
Belgium	BE	57	1,000	EP	4,494
Belize	BZ	0	2	54	3
Bermuda	BM	n.a.	0	n.a.	121
Bolivia (Plurinational State of)	BO	n.a.	0	n.a.	8
Bosnia and Herzegovina	BA	7	12	9	2
Brazil	BR	444	492	15,639[a]	701
Brunei Darussalam	BN	n.a.	0	n.a.	22
Bulgaria	BG	21	25	14	58
Burundi	BI	n.a.	1	n.a.	3
Cameroon	CM	OA	9	OA	2
Canada	CA	1,895	2,569	31,975	6,737
Chile	CL	28	55	—	58
China	CN	8,000	7,906	57,641	4,171

20 See the note on "Statistical Sources".
21 See EPC Member States in Section 11.

Name	Code	PCT International Phase Filings in 2009		PCT National Phase Entries in 2008	
		At Receiving Office	By Country of Origin	At Designated / Elected Office	By Country of Origin
Colombia	CO	0	64	1,747[a]	38
Congo	CG	OA	0	OA	1
Cook Islands	CK	n.a.	0	n.a.	1
Costa Rica	CR	1	4	—	2
Croatia	HR	34	38	53	83
Cuba	CU	9	9	—	253
Cyprus	CY	1	37	EP	200
Czech Republic	CZ	164	178	88	292
Democratic People's Republic of Korea	KP	0	0	—	20
Denmark	DK	602	1,353	49	4,291
Dominica	DM	0	1	—	0
Dominican Republic	DO	1	1	—	0
Ecuador	EC	3	4	—	2
Egypt	EG	33	33	—	23
El Salvador	SV	3	3	—	0
Estonia	EE	17	30	7	36
Eurasian Patent Organization	EA	11	n.a.	2,545	n.a.
European Patent Office	EP	27,336	n.a.	83,576	n.a.
Finland	FI	1,157	2,133	56	5,450
France	FR	3,770	7,163	EP	20,805
Gabon	GA	OA	1	OA	2
Georgia	GE	4	5	—	2
Germany	DE	1,954	16,732	3,662	50,335
Greece	GR	69	99	EP	224
Guatemala	GT	2	2	240	0
Honduras	HN	0	1	—	0
Hong Kong (SAR), China	HK	n.a.	0	n.a.	128
Hungary	HU	112	141	56	496
Iceland	IS	17	57	26	139
India	IN	663	865	—	2,075
Indonesia	ID	2	7	—	6
International Bureau	IB	8,727	n.a.	n.a.	n.a.
Iran (Islamic Republic of)	IR	n.a.	5	n.a.	10
Ireland	IE	91	469	EP	1,533
Israel	IL	1,238	1,577	6,288	4,879
Italy	IT	598	2,664	EP	7,448
Jamaica	JM	n.a.	3	n.a.	3
Japan	JP	29,291	29,807	54,546	73,642
Jordan	JO	n.a.	1	n.a.	10
Kazakhstan	KZ	21	21	135	21
Kenya	KE	3	5	—	2
Kuwait	KW	n.a.	1	n.a.	3
Kyrgyzstan	KG	0	1	2	0
Latvia	LV	11	24	EP	39
Lebanon	LB	n.a.	2	n.a.	6
Libyan Arab Jamahiriya	LY	1	4	—	0
Liechtenstein	LI	CH	56	CH	149
Lithuania	LT	17	22	6	8

Name	Code	PCT International Phase Filings in 2009		PCT National Phase Entries in 2008	
		At Receiving Office	By Country of Origin	At Designated / Elected Office	By Country of Origin
Luxembourg	LU	0	227	—	571
Macau (SAR), China	MO	n.a.	0	n.a.	2
Madagascar	MG	IB	0	61	0
Malaysia	MY	224	224	3,529	169
Malta	MT	0	31	EP	42
Marshall Islands	MH	n.a.	—	n.a.	1
Mauritius	MU	n.a.	2	n.a.	30
Mexico	MX	146	192	14,160	329
Moldova	MD	2	2	16	1
Monaco	MC	0	13	EP	33
Mongolia	MN	0	2	—	0
Morocco	MA	22	25	767	9
Namibia	NA	AP	4	—	4
Netherlands	NL	1,102	4,445	EP	16,727
Netherlands Antilles	AN	n.a.	0	n.a.	26
New Zealand	NZ	286	283	3,258	932
Niger	NE	OA	1	OA	1
Nigeria	NG	IB	2	—	0
Norway	NO	449	629	4,902[a]	2,070
Oman	OM	IB	1	—	3
Panama	PA	n.a.	10	n.a.	80
Papua New Guinea	PG	0	0	41	0
Peru	PE	0	9	—	1
Philippines	PH	20	20	2,828	19
Poland	PL	152	173	58	136
Portugal	PT	82	165	—	265
Qatar	QA	n.a.	1	n.a.	1
Republic of Korea	KR	8,026	8,049	31,909	11,512
Romania	RO	9	12	12	49
Russian Federation	RU	678	669	11,499	857
Saint Kitts and Nevis	KN	0	2	—	11
Saint Vincent and the Grenadines	VC	0	1	—	0
Samoa	WS	n.a.	2	n.a.	0
San Marino	SM	2	8	—	15
Saudi Arabia	SA	n.a.	71	n.a.	156
Senegal	SN	OA	0	OA	1
Serbia	RS	25	26	73	21
Seychelles	SC	0	11	—	14
Singapore	SG	500	572	7,322	1,417
Slovakia	SK	21	34	36	50
Slovenia	SI	68	137	EP	226
Somalia	SO	n.a.	1	n.a.	0
South Africa	ZA	105	373	—	926
Spain	ES	1,244	1,561	101	2,823
Sri Lanka	LK	IB	16	264	1
Sweden	SE	2,045	3,581	—	11,247
Switzerland	CH	412	3,673	3	16,121
Syrian Arab Republic	SY	9	9	—	1

Name	Code	PCT International Phase Filings in 2009		PCT National Phase Entries in 2008	
		At Receiving Office	By Country of Origin	At Designated / Elected Office	By Country of Origin
T F Y R of Macedonia	MK	2	2	406	0
Thailand	TH	3	19	—	28
Trinidad and Tobago	TT	1	2	—	7
Tunisia	TN	2	6	—	8
Turkey	TR	159	385	177	367
Ukraine	UA	72	79	2,548	56
United Arab Emirates	AE	IB	28	—	19
United Kingdom	GB	4,893	5,326	1,921	17,528
United States of America	US	46,490	46,079	61,122	138,728
Uruguay	UY	n.a.	10	—	8
Uzbekistan	UZ	0	0	166	1
Vanuatu	VU	n.a.	1	n.a.	4
Venezuela	VE	n.a.	2	—	3
Viet Nam	VN	4	5	—	5
Yemen	YE	n.a.	1	n.a.	0
Zambia	ZM	0	1	—	0
Zimbabwe	ZW	0	1	—	0
Unknown		n.a.	38	37,570[b]	41,341[b]
World total		155,900[b]	155,900[b]	464,098[b]	464,098[b]

Source: WIPO Statistics Database

Note: a 2007 data; b estimated data; — unknown data; n.a. not applicable; AP, EP, IB, OA competent designated, elected or receiving office

LIST OF ACRONYMS

DO	Designated Office
EO	Elected Office
EPC	European Patent Convention
EPO	uropean Patent Office
GDP	Gross Domestic Product
IB	International Bureau of WIPO
IMF	International Monetary Fund
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
KIPO	Korean Intellectual Property Office
PCT	Patent Cooperation Treaty
R&D	Research and Development
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. In PCT statistics, the name of 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 then examines the application and decides whether to grant a patent or reject the application.

Authority specified for Supplementary Search (SISA): An International Searching Authority (ISA) that provides 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, establishment of international searches and written opinions by ISAs, international publication of PCT applications, and provides 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 PCT 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 the home country at a patent office of a foreign country. For example, a patent application filed by an applicant residing in France at the USPTO is considered a "filing abroad" from the perspective of France. A "filing abroad" is the mirror concept to a "non-resident filing", which describes a patent application by a resident of a foreign country from the perspective of the home country.

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 International Bureau of the World Intellectual Property Organization 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 received the PCT application (provided certain formality requirements are met).

International Patent Classification (IPC): An internationally recognized patent classification system. IPC has a hierarchical structure of language-independent symbols that consists of sections, classes, subclasses and groups. IPC symbols are assigned according to technical features in the patent applications. One patent application can be assigned multiple IPC symbols, as it may relate to multiple technical features.

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 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 a SISR by a SISA; and
5. the optional establishment of an IPRP by an IPEA.

International Preliminary Examining Authority (IPEA): 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 the IPEA on 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 the 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): National patent office or intergovernmental organization appointed by the PCT Assembly to carry out international searches. ISA establishes ISRs and written opinions on PCT applications.

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

National Phase Entry: When the PCT applicant enters the national phase before a national or regional patent office it is referred to as national phase entry. It consists of the payment of fees and, where necessary, the submission of the translated PCT application. It must take place within 30 months from the priority date of the application (longer time periods are allowed by some offices).

National Phase of PCT: This follows the international phase of the PCT procedure, and consists of the processing of the application before each national or regional patent office in which the applicant seeks protection for his invention.

Non-Resident Filing: For statistical purposes, a patent application filed with the patent office of the home country by an applicant from a foreign country. For example, a patent application filed at 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 mirror concept to a filing abroad, which describes a patent application filed by a home country resident at a foreign patent office. "Non-resident filing" is also known as "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 treaties. The Paris Convention establishes, among others, the "right of priority" which enables a patent applicant, when filing an application in countries other than the original country of filing, to claim priority of up to 12 months for this filing.

Patent: A patent is an exclusive rights granted by law to the applicant for the invention for a limited period of time (generally 20 years from 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 manner that enables others, skilled in the art, to replicate the invention. The patent system is designed to balance the interests of applicants (exclusive rights) and the interests of society (disclosure of 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 through the filing of an application at the relevant national or regional office(s), or by the filing a PCT application.

Patent Cooperation Treaty (PCT): An international treaty administered by the World Intellectual Property Organization. The PCT allows applicants to seek patent protection for an invention simultaneously in a large number of countries (PCT Contracting States) by filing a single "PCT international application". The decision on whether to grant patent rights remains at the discretion of the national or regional patent offices.

PATENTSCOPE® Search Service: The PATENTSCOPE® search service allows access, free of charge, to all PCT applications published. 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 Patent Cooperation Treaty (PCT). PCT application is also known as a PCT international application.

Prior Art: All information that has been disclosed to the public in any form about an invention before a given date. The prior art information 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: Priority date is 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 an early publication of the PCT application.

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

Resident Filing: For statistical purposes, an application filed at a patent office by an applicant having residence in the same country. For example, a patent application filed at the Japan Patent Office by a resident of Japan is considered a resident filing for Japan Patent Office. "Resident filing" is also known as "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. Supplementary international search permits 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): WIPO is a specialized agency of the United Nations. It is dedicated to developing a balanced and accessible international intellectual property (IP) system, which 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 nonbinding written opinion on the questions whether the claimed invention appears to be novel, to involve an inventive step and to be industrially applicable.

PCT CONTRACTING STATES

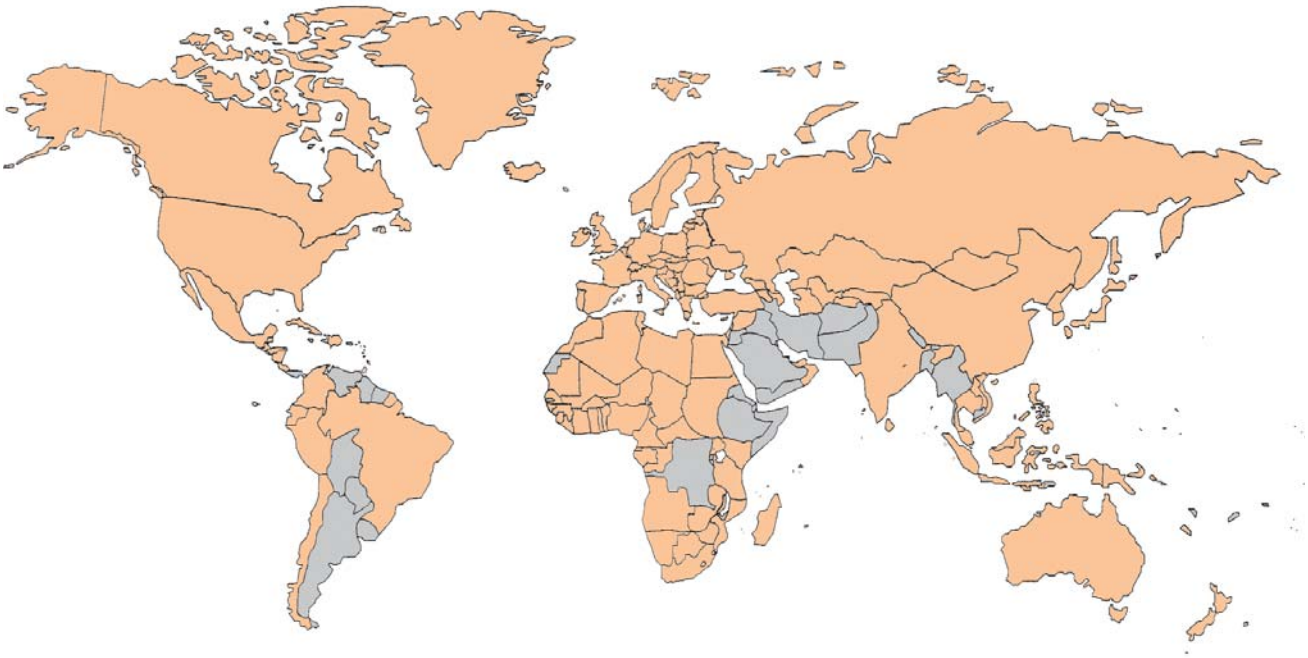
During 2009, three new Contracting States acceded to the PCT, namely: Chile (effective June 2), Peru (effective June 6) and Thailand (effective December 24) – bringing the total number to 142.

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

1 Extension of European patent possible.
2 May only be designated for a regional patent (the "national route" via the PCT has been closed).
3 Only international applications filed on or after January 1, 2008, include the designation of this State for a European patent.
4 Only international applications filed on or after January 1, 2009, include the designation of this State for a European patent.
5 Only international applications filed on or after July 1, 2009, include the designation of this State for a European 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).

PCT Contracting States in 2009



ADDITIONAL RESOURCES

The following patent resources are available on the WIPO website:

PATENTSCOPE® – WIPO's gateway to patent services and activities.
http://www.wipo.int/patentscope/en/

Information on the PCT System.
http://www.wipo.int/pct/en/

PATENTSCOPE® search service – Search PCT international applications and view/download complete patent applications and related documentation.
http://www.wipo.int/pctdb/en/

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.
http://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.
http://www.wipo.int/patent/law/en/

World Intellectual Property Organization

Address:
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WIPO Publication No. 901(E)/09 *ISBN 978-92-805-1956-3*