

## A million filings later . . . a look at the Patent Co-operation Treaty

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*On January 14, 2005 the World Intellectual Property Organization (WIPO) announced the filing of the 1 millionth Patent Co-operation Treaty (PCT) filing [1]. It will be about 18 months before we find out the details of this latest filing, due to filing/application conventions, but the system has certainly come a long way from the first filing in 1978....*

### The first PCT application

The first PCT application was filed June 1, 1978—and then published on October 19 in the same year [Figure 1]. This marked the momentous culmination of many years' work, since the initial signing of the Patent Co-operation Treaty in 1970.

“Low temperature synthesis of vitreous bodies and their intermediates” was filed by Mrinmay Samanta from Washington DC, USA. As the title implies, it concerns a method of making high purity glass in complex shapes. The application has since been cited in 17 patents, covering the production of optical fibres, lenses, optical waveguides, and even bone prosthetics. The citing companies include Olympus, Zeiss, Philips, Toshiba, Sumitomo Electric, and Dupont [2]. It also issued as a granted US patent (US4220461-A) on 2 September 1980.

Figure 1: The first PCT application

### A system of increasing importance

WIPO and the PCT process have certainly changed in the last 26 years. From the original 18 contracting states, 126 countries have now signed the Patent Co-operation Treaty, the latest being Nigeria—where the Treaty will enter into force on May 8, 2005 [3].

In the first year of the PCT process, 19 applications were published. This has grown to an average of 10,000 filings per month [4]. Figure 2 shows the constant annual increase in the number of PCT applications published [5]. Applications have risen so much that there were almost 100 times the number of applications in 2004 than in 1979, the first full year of PCT applications.

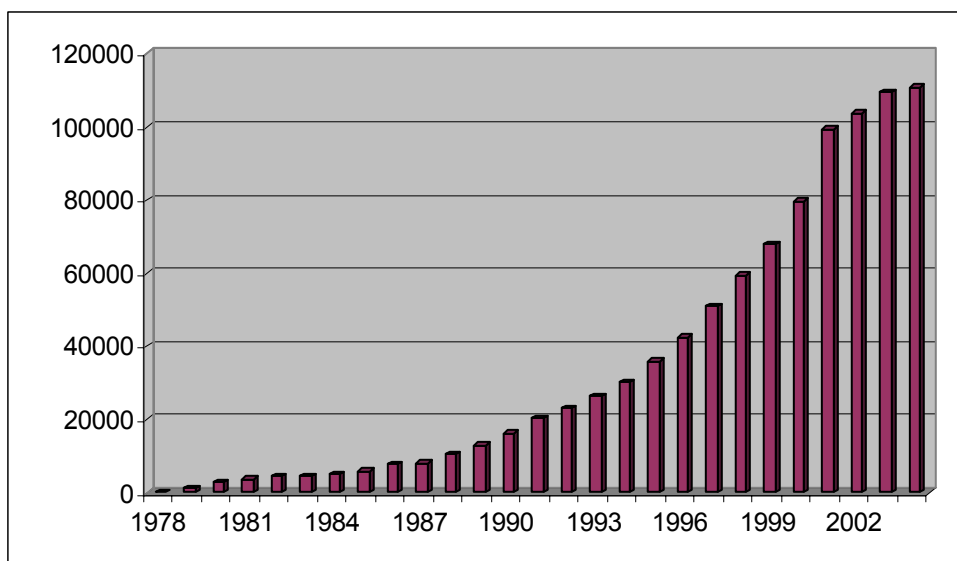


Figure 2: Number of PCT applications published per year

This has, of course, meant a corresponding increase in the cumulative total number of PCT applications (*Figure 3*). It actually took 18 years of the PCT process to reach 250,000 applications, four years to double that, and only four more years to get to the full million.

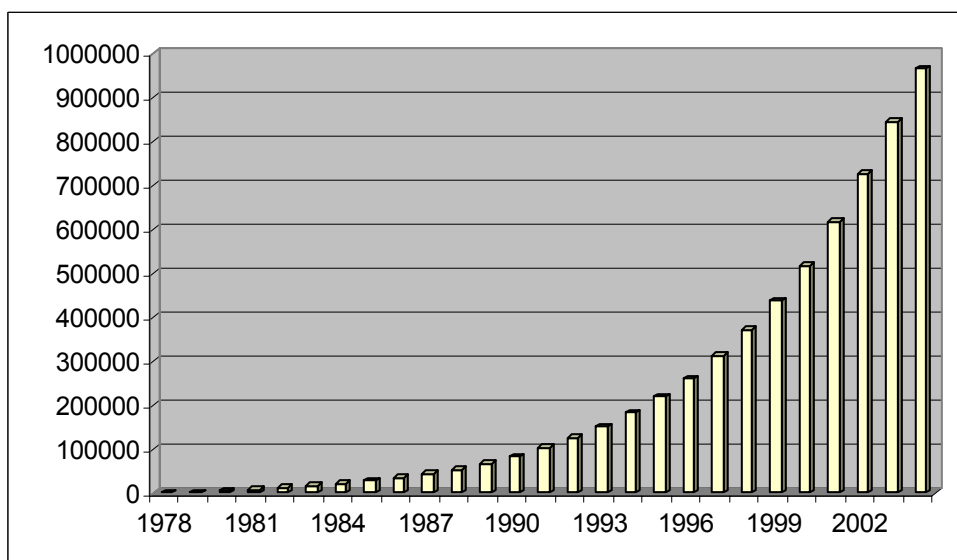


Figure 3: Cumulative total of PCT applications published

### **A reflection of the world economy**

Due to the nature of the PCT process, the first national patent (priority) that is filed by the applicant gives us a good indication of their location. The US has consistently made up the largest proportion of priority applications, constantly making up 35-45% [*Figure 4*]. Japanese priority applications have been increasing recently after a slump in the 1990s, due to the recession that dogged Japan throughout that time. We can also see a slight downturn in priority applications from European countries such as Germany and the UK.

What is more interesting is tracking the priority applications from countries such as Korea and China. Since the first instance of a PCT application with a Chinese priority in 1984 (with the introduction of the Chinese patent system in that year), the proportion has increased by a factor of 20 (0.05% to 0.99% in 2004), making China the 13<sup>th</sup> most common priority country. PCT publications with a Korean priority now represent an even larger share: 2.66% in 2004, making them 7<sup>th</sup> most common priority country.

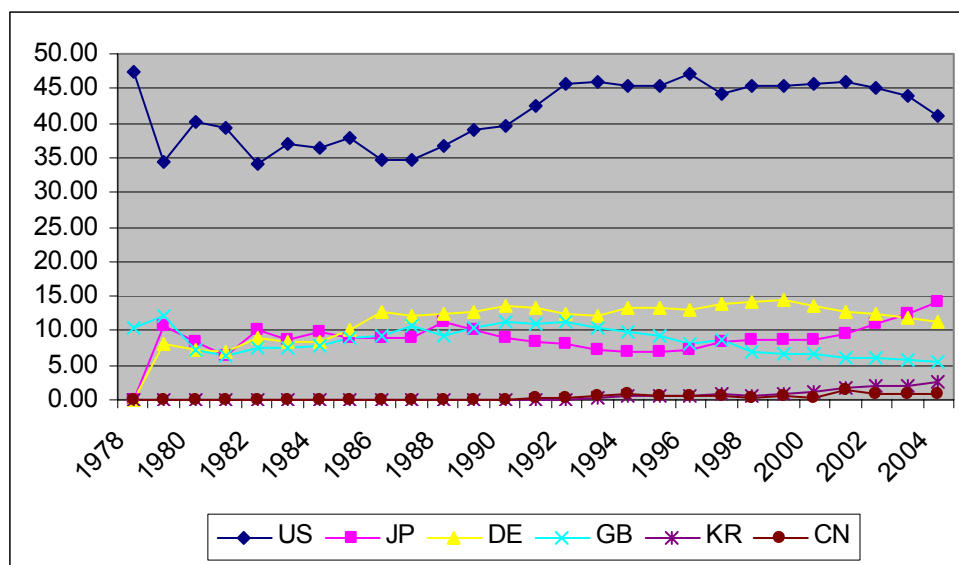


Figure 4: Percentage of PCT publications with national priorities [6]

### Trends in technology

Our lives have changed out of all recognition since the late 1970s, and two crucial technologies driving these changes have been computers and biotechnology. This is reflected in PCT applications. In 2004, the two most applied Derwent Classes (a broad classification system applied to all patents within the *Derwent World Patents Index*®) were those for Computers and for Biotechnology. These classes were certainly not widely applied when the PCT system began. We can compare this to the two most widely applied classes in 1979: those describing Engineering Instrumentation and Scientific Instrumentation. The number of PCT applications outlining advances in these fields has remained relatively constant since the 1980s (see fig. 5).

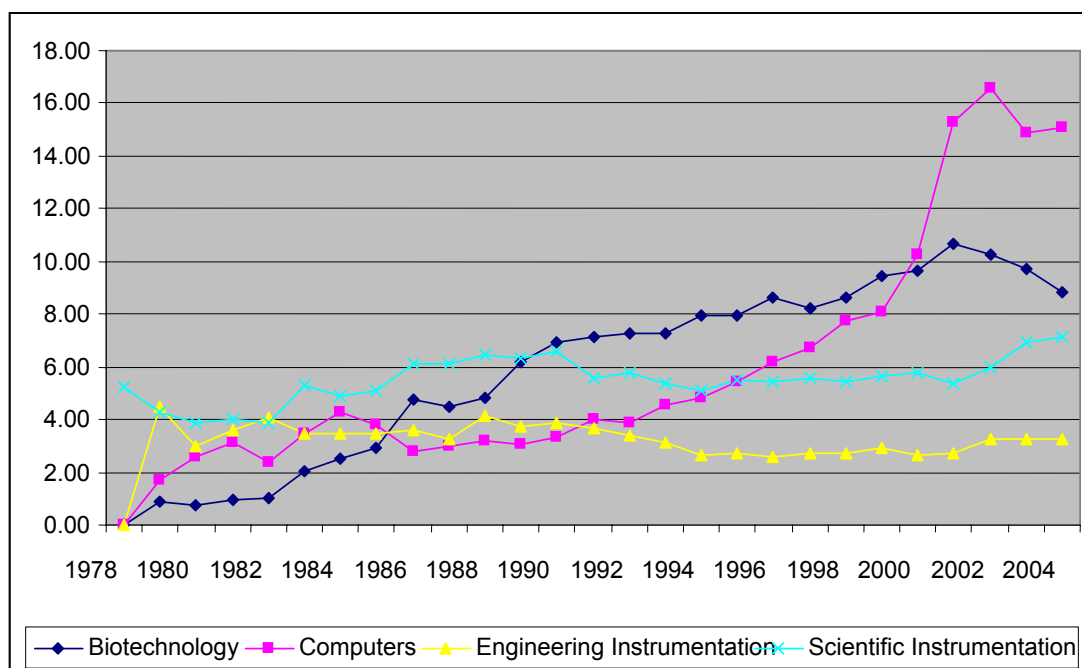


Figure 5: % of PCT publications by technology [7]

### The importance of the PCT system

The PCT is not a patent itself but an application process—accepting applications and then distributing them to the patent offices that the applicant is seeking patent protection. Any patents that are later filed with the national offices then use the filing date of the PCT application as the priority date.

The advantage of this process to the applicant is that they can file their PCT application and select a large number of “designated states” (countries where national filings may be taken out at a later date), at a relatively low cost (currently a flat fee of US\$1,100). Applicants then have one year to seek national patents in as many of those countries as they think will be commercially useful, and then, of course, up to another 18 months before those national patents are published and they then need to provide large amounts of money for fees. This gives applicants up to 30 months to decide which markets to seek protection in, without spending massive amounts of money. This is, in particular, a great advantage for SMEs and individual inventors, as it means they can produce and sell their product for 30 months before paying the patent fees.

The PCT process is also a lot simpler than filing separately in individual countries: there is only one application form, without the need to translate everything for each country. Also, through the PCT Search Report—a search of relevant patents or documents already in existence—a very quick indication of the invention’s patentability is given to the applicant.

## **Conclusion**

In its 26 years of active filings, the Patent Cooperation Treaty has been a great success. It has streamlined patenting processes, essential in today's world of the "Global Economy", and has reflected the increasing importance placed on Intellectual Property.

In the words of Mr Francis Gurry, Deputy Director General of WIPO, ".. we are in for challenging and exciting times for the PCT for the next million applications". [8]

## **Notes:**

[1], [4], [8] WIPO Press Release: "WIPO marks filing of one millionth PCT application" 14 January 2005 - [http://www.wipo.int/edocs/prdocs/en/2005/wipo\\_pr\\_2005\\_401.html](http://www.wipo.int/edocs/prdocs/en/2005/wipo_pr_2005_401.html)

[2] Source – *Derwent Patents Citation Index*

[3] WIPO Press Release: "Nigeria accedes to WIPO's Patent Cooperation Treaty" 15 February 2005 - [http://www.wipo.int/edocs/prdocs/en/2005/wipo\\_upd\\_2005\\_238.html](http://www.wipo.int/edocs/prdocs/en/2005/wipo_upd_2005_238.html)

[5], [6], [7] Source – *Derwent World Patents Index*