

Facing up to Europe's patent challenges

The European Patent Office is not only responsible for the delivery of a high-quality patent application and grant process, but also has a central role to play as Europe debates its patent future

By **Joff Wild**, Editor, *IAM* magazine

The European Patent Office (EPO) was established by the contracting states to the European Patent Convention (EPC) back in the 1970s and made its first grants in 1980. In its first few years of existence it was handling an annual workload of approximately 10,000 applications. By the end of 2005, this figure stood at 128,679 a year, a rise of 4% on the 2004 total. Of these applications, 49.5% came from people or organisations based in EPC member states, while 25.4% came from the United States and 16.7% from Japan.

The EPO, which is headquartered in Munich and has satellite offices in Berlin, Vienna and The Hague, is now established, along with the US Patent and Trademark Office and the Japanese Patent Office, as one of the three most important patent offices in the world. Between them, the so-called trilateral authorities handle well over 50% of the world's patent applications.

What makes the EPO unique is the fact that it grants rights that have the potential to cover all contracting states to the EPC (with the accession of Latvia in 2005, there are now 31 of these, with five more extension states also recognising European patents). The EPC allows organisations to take advantage of a single grant procedure by filing an application in one of the three official languages of the EPO – English, French and German – to gain protection that potentially covers an area with a population of close to 500 million people. Not that every European patent covers all 31 member states of the EPC – it is up to the applicant itself to nominate those jurisdictions where it would like its granted patent to apply.

In 2005 the EPO granted 53,300 patents, which means that by the end of that year it had granted a total of 760,700 since it started to operate, equivalent to a figure of 6.3 million national patents.

Over the years, the EPO has established a reputation for the quality of the patents it grants. It is an issue to which the Office continues to pay close attention. With close to 3,500 examiners, expertise across a wide variety of technical areas and access to a database of 56 million patent documents – as well as a library composed of over 55 million facsimile patent documents and non-patent literature – applicants and other interested parties know that every application submitted to the EPO receives close scrutiny.

The opposition and appeals process also ensures that there is the opportunity to address any problems that do occur during the examination stage before embarking upon potentially costly civil litigation in member states' courts. Oppositions must be filed within nine months of a patent being granted and in 2005, 2,960 were filed, meaning an opposition rate of 5.4%. The Boards of Appeal, meanwhile, registered 1,684 new cases during 2005, representing a 9.8% increase on 2004's figure of 1,533; settled appeals in 2005 numbered 1,499, slightly up on the previous year. During 2005, there was also some progress on dealing with the backlog of cases waiting to be heard by the various boards of appeal – by the end of the year, 753 appeals had been pending for over two years, which represented a 9% improvement on 2004's total of 832. Two new boards of appeal were also created. These handle issues relating to chemistry and electricity. There are now 24 boards of appeal in total.

Pendency times, of course, are not a problem limited to the appeals process. They remain a significant challenge for the whole of the Office. Although around 25% of patent grants are now made inside the current target period of 36 months from application, the average time to grant remains high, at 45.3 months (though this does represent an improvement of nearly a month on the 2004 average). Over the medium to long term, it is hoped that the introduction of an enhanced service relating to the delivery of first opinions from examiners to applicants will be help to reduce waiting times.

Designed to enhance the EPO's reputation for quality and to help applicants make earlier, and therefore less expensive, decisions with regards to their patenting strategies, the service aims to provide a first opinion from the examiner on an application within an average of six months from the original submission of the application. In the opinion the examiner outlines his impressions of the strength of the application based on the claims and on the prior art. He can advise that in its current state the application does not look like a potential candidate for grant or, alternatively, that there appear to be few problems. Similarly, the examiner also makes suggestions as to how the application can be altered in order to stand a greater chance of making it through to grant. In providing this service at such an early stage in the application process, the aim is to allow the Office's customers to manage their patenting risks more effectively and so gain greater value from their IP portfolios.

Looking outwards

The EPO does not issue patents that are enforceable across Europe. Instead, an applicant will nominate those countries in which it wants to be protected and, if the application gets the green light, the EPO will effectively grant national patent rights for each of those countries. And while the EPO route makes life easier for applicants and also means that potential patents are subjected to highly rigorous scrutiny, the current system does present major problems; specifically in the areas of cost and litigation, should this arise. It remains the case that getting Europe-wide protection is significantly more expensive than it is to get protection for the whole of the US or Japan; while enforcement of rights is far less certain. Courts in, say, Germany and the UK will often reach completely different decisions in cases that are to all intents and purposes about the same thing.

Applications filed in 2005

			Change in %
Direct European filings	2005	60762	+3.8
	2004	58523	
Euro-PCT applications filed (international phase)	2005	132861	+8.8
	2004	122139	
Total European applications (incl. Euro-PCT international phase)	2005	193623	+7.2
	2004	180662	
Euro-PCT applications entering the regional phase	2005	67917	+4.1
	2004	65252	
European applications (incl. Euro-PCT regional phase)	2005	128679	+4.0
	2004	123775	

At the European level, there is acknowledgement that solutions have to be found to the current problems, especially as a strong patent system is a cornerstone of the Lisbon Agenda, agreed by European leaders back in 2000. The Lisbon Agreement aims to establish Europe as the world's most competitive knowledge-based economy by 2010.

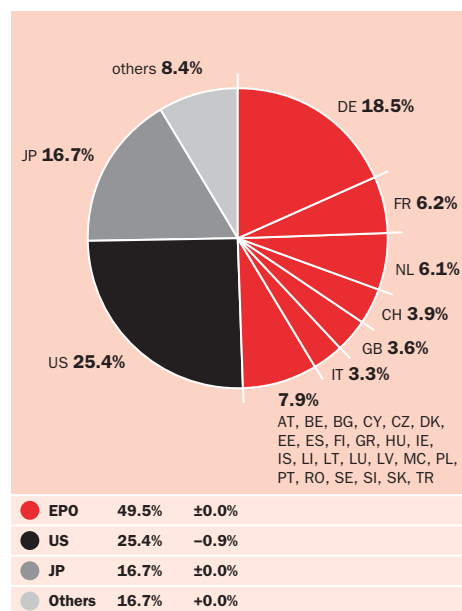
Although EU leaders have consistently stressed their commitment to the development of a unitary patent for the European Union – known as the Community patent – that would be granted by the EPO and would be automatically valid in all member states of the EU, and enforceable under a single set of legal principles, progress towards seeing this come into force has been painfully slow.

By establishing a Community patent, the idea is that patents will be less expensive to obtain and that patentees will have more certainty because the rights they own will be subject to only one set of rules and procedures. However, while there seems to be general consensus that the Community patent is needed, the devil is in the detail. There are a number of issues that still have to be resolved before it can take effect, most of which resolve around language and, to a lesser extent, the nature of the enforcement framework. Although talks are ongoing there seems little prospect of a breakthrough in the short to medium term, as the negotiating parties struggle to design a system that not only makes patenting in Europe less expensive and more certain, but also satisfies those that worry about issues such as translations.

Although the EPO has made clear that it supports the introduction of the Community patent, it is also pragmatic enough to realise that the chances of it actually happening any time soon are remote. That means, of course, that European patentees and applicants are still faced with the disadvantages the current patent

Source: European Patent Office, Annual Report 2005

Applications by residence of applicant in 2005



Source: European Patent Office, Annual Report 2005

infrastructure presents – points that were underlined during a European Commission consultation process on Europe's patent system and its future that started at the beginning of 2006 and culminated in a public hearing in Brussels in July.

The need to harmonise

What became apparent during this consultation process, which saw a total of 2,515 submissions from individuals and various interested organisations, was that while support for the principles behind the Community patent remained strong, those thinking that it was a viable prospect in its current form were almost non-existent.

This was something that was recognised by the Commissioner of the Internal Market Directorate General Charlie McCreedy in a speech he made in Prague in October 2006. "Industry is not enamoured by the compromise reached by the Council in 2003 on the Community patent in terms of the proposed solution in respect of language and the jurisdictional system because they don't achieve the cost reductions and the simplification of the system that industry wants," he said. Instead of the Community patent, therefore, McGreevy hinted that the Commission may throw its weight behind two other initiatives supported by the EPO: the European Patent Litigation Agreement (EPLA) on jurisdiction and the London Agreement (or Protocol) on the language regime. "Before the end of this year," he explained, "I will be proposing that the Commission adopt a communication and action plan aimed at tackling the patent issues all in one approach. In particular, I want to tackle the jurisdictional issue so that we don't have different courts in different countries delivering divergent interpretations on the same patented invention." In a telling final sentence McGreevy stated: "We cannot aspire to being the most competitive economy in the world if we don't find workable solutions to patent application and protection."

Progress on the EPLA

A draft of the EPLA has been agreed by officials from a number of member states of the European Patent Convention, including the UK, Germany, France, Sweden, Switzerland and the Netherlands. This envisages the creation of a European Patent Court that would have exclusive jurisdiction to hear cases concerning actual or threatened infringements of European patents, and actions and counterclaims for the revocation of European patents, as long

as the defendant were domiciled in a contracting state.

In this way, the infringement and validity of European patents would be litigated in the same proceedings, while any decision to revoke a European patent would be applicable in all contracting states to the EPLA. In effect, this would make the European patent a unitary right in those countries that signed up to the Agreement.

In the past, the Internal Market DG had been hostile to the EPLA, regarding it as very much a second best to the Community patent, while at the same time casting doubt on its legality under EU law. However, it seems that minds have been changed. In his public hearing testimony, McCreedy described the EPLA as "a promising route" and is reported to have instructed officials to work on taking the project forward.

Furthermore, McCreedy told a committee meeting of the European Parliament in June that he was determined to ensure that Europe's patent system is reformed. "Businessmen, faced with a 21st-century global economy, scratch their heads in disbelief when they see us stuck in discussions about language regimes and regional distribution of courts. What they want is a cheaper and reliable patent system. That's why I think we should look at all possible routes forward, be they Community or non-Community initiatives."

As a voluntary agreement only those countries that wish to be bound by the EPLA need to sign up, although in practice the endorsement of Germany, the UK and France takes care of Europe's three biggest markets: this will increase certainty for patentees and also reduce the costs of pan-European litigation. An added attraction is that because this is an agreement between contracting states of the EPC, there is no need for any green light from all EU member states or the European Parliament. However, in a vote on 12th October, the European Parliament, while supporting the broad principles behind the EPLA, made clear that it had substantial reservations about the EPLA as currently worded. Although this does not, of itself, preclude the Agreement being ratified, it does make it politically much more difficult.

The Protocol advances

But the EPLA is not the only initiative that looks like moving forward. Also at the July public hearings, EPO chief Alain Pompidou stated that he believed the French government was now ready to ratify the Agreement on the application of Article 65 of

The European Inventor of the Year Awards



Group photo of the winners of the first European Inventor of the Year Awards

On the evening of 3rd May 2006, at the Autoworld Museum in Brussels, over 400 people attended a gala dinner and ceremony to discover the names of the first recipients of the European Inventor of the Year Awards. Hosted by veteran BBC journalist Michael Buerk and jointly organised by the European Patent Office and the European Commission, the Awards were designed to showcase the importance of innovation for Europe's future and to strengthen the continent's position as a dynamic centre for science and R&D in the context of the EU's Lisbon Agenda. Commission Vice-President and Enterprise and Industry Commissioner Günter Verheugen and EPO President Alain Pompidou were both present to honour the winners.

To establish the first set of Award recipients, an international jury chaired by former Dutch Prime Minister Wim Kok nominated inventors from 11 nations. The nominees represented nine countries in Europe, plus Australia and the United States. The list the jury drew up covered inventions from all the fields of technology in which the EPO granted European patents between 1991 and 2000. It granted over 380,000 patents in that period, so in making their choice the



EPO President Alain Pompidou with Commission Vice President Günter Verheugen

jurors drew on the technical expertise of the Office's 3,500 patent examiners.

Awards were made in a total of six categories and were handed to the following inventors:

- **Industry category** – Zbigniew Janowicz and Cornelis Hollenberg, who invented a method for making proteins in *Hansenula* yeast, which is used to produce an affordable vaccine against hepatitis B.

- **SME category** – Stephen Fodor, Michael Pirrung, Leighton Read and Lubert Stryer for their invention of the DNA chip while working for the Dutch company Affymax's US research institute.
- **Universities and research institutions category** – Peter Grünberg, of Germany's Jülich Research Centre, for his discovery of the giant-magnetoresistance effect, or GMR.
- **New EU member states category** – John Starrett, Joanne Bronson, John Martin, Muzammil Mansuri and David Tortolani, whose work – based on research done at the Academy of Sciences of the Czech Republic – resulted in a breakthrough with chemical compounds, called prodrugs of phosphonates.
- **Non-European countries category** – Larry Gold and Craig Tuerk, of NeXstar Pharmaceuticals, Boulder, United States, who found out that nucleic acids can bind a protein to potentially intercept other proteins that cause diseases such as AMD.
- **Lifetime achievement category** – Federico Faggin, an Italian scientist now living in California, who developed the first microprocessor chip, allowing huge volumes of data to be processed and unleashing a revolution in computer technology.

Speaking at the event, Professor Pompidou said that inventors should be "treated like pop stars", while Commissioner Verheugen expressed his hope that one day "the European Inventor of the Year will have the same prestige as the Nobel Prize". The Awards will now be held on an annual basis.

All photographs by Rupert Warren, © European Patent Office

the Convention on the Grant of European Patents (the London Protocol) and predicted that it would do so before the country's May 2007 elections.

Under the Protocol, member states of the EPC which share an official language with the EPO, ie English, French and German, would not require any translation of European patents in one of their official languages. Other countries, meanwhile, would have to choose one of the official languages of the EPO as a "prescribed language", in which European patents would be translated, although they would also retain the right to require translation of the claims in one of their official languages. It is estimated that

should the Protocol come into force, it would cut the cost of translations in Europe by 50%.

A number of countries have ratified the Protocol, but it cannot come into force without the sign-up of France, the UK and Germany. And although the latter two have given it the green light, France has been reluctant up to now, citing concerns about the effect the Protocol would have on the French language and its role in the dissemination of scientific knowledge (in 2001, for example, the European Parliamentary Regional Assembly of the *Francophonie* (French-speaking countries) passed a resolution rejecting the Protocol). A major breakthrough in this regard came at the end of September 2006, when the French

The top filers with the EPO in 2005

Rank	Company	Application for which European grant proceedings were instituted in 2005
1	Philips	4883
2	Siemens	1863
3	Samsung Electronics	1585
4	Matsushita Electric	1390
5	LG Electronics	1152
6	Sony	1117
7	Bosch	1030
8	Microsoft	879
9	Fujitsu	837
10	BASF	778
11	Nokia	688
12	Thomson	577
13	DSM IP Assets	575
14	IBM	573
15	General Electric	567
16	Alcatel	552
17	Seiko Epson	521
18	Bayer	519
19	3M	517
20	Canon	499
21	Hitachi	492
22	Fuji	462
23	L'Oréal	448
24	Delphi Technologies	447
25	NEC	431

Source: European Patent Office, Annual Report 2005

Constitutional Council ruled that the Protocol did not run contrary to the French Constitution, so clearing the way for formal French ratification. If this were now to occur, it would be a major step towards the Protocol coming into force and good news for all companies that patent inventions in Europe.

Obstacles ahead

So for European patentees, the signs are good. But it would be wise to remember that nothing has yet been agreed. And nothing is guaranteed. But with Community patent negotiations looking as if they have stalled, attention has shifted to the Protocol and the EPLA.

Of the two, the Protocol looks to be the most likely to progress quickly as its aim is one that everybody shares – a much cheaper patenting process in Europe. That said, language can be an emotive issue in France and there is no guarantee that, with elections looming, the Protocol will not be seized on as an issue in the run-up to polling day. In addition, even if France does ratify, that does not guarantee the Protocol will come into force, as a minimum of eight EPC member states must accede before it does. So far, this number has not been reached.

But with France on board, it will just be a matter of time for the Protocol. More problematic is the future of the EPLA. Here, there are bigger issues to confront. These include exactly how the new system will function and how much it will cost. More significant, however, is that the anti-software patent lobby has decided that the EPLA is yet another back-door attempt to introduce software patents into Europe and, as a result, is now beginning to organise in opposition to it.

Although McCreedy's Internal Market DG may be getting more relaxed about the desirability and legality of the EPLA, this does not guarantee that other parts of the Commission will be equally sanguine; while strong lobbying could begin to make the whole issue less comfortable for individual member states. Certainly the vote of the European Parliament indicates that many politicians have yet to be fully convinced of the Agreement's merits.

Difficult steps

Because Europe remains a collection of sovereign states, it is always going to be difficult to construct a patent regime on the continent that matches those found in the United States and Japan, and that we will see, in the future, in places such as China and India. Each of these countries has the advantage of operating under a single patent regime that is administered by an office responsible to just one government. Law making and policy discussions will inevitably be easier in such circumstances.

One only has to look at the failed attempt to get the Computer Implemented Inventions Directive approved by the European Parliament, as well as efforts to force countries to implement the Biotechnology Directive (which itself took a decade to get through the Brussels decision-making process) to see the task patent owners face in Europe. All they can do is to educate those that take decisions so that, in time, they realise just how important patents are to the future of Europe's economy.

While uncertainty and delay seem to be the natural state of things in a Europe that often seems to be fonder of grand statements rather than hard-nosed action, what is clear is that the EPO remains committed to ensuring that it not only grants high-quality patents, but also keeps the whole issue of intellectual property and patenting in particular on the political agenda. Ultimately, it is up to rights owners to force the politicians to take their needs seriously. They can be sure, however, that as they attempt to do this they will have a loyal friend in Munich.