

In June this year, *MIP* and the Stockholm Network jointly organized a roundtable in Brussels on the future of innovation in Europe. **James Nurton**, editor of *MIP*, and **Meir Pugatch**, of Haifa University, who is head of the IP and competition programme at the Stockholm Network, introduce a special report

# Europe maps a new future for innovation

**T**he Stockholm Network/*MIP* roundtable held in Brussels on June 16, entitled “The Lisbon Agenda and the Future of IT IP rights in Europe: Cause for Hope or Cause for Concern?”, was a timely consideration of some of the most important and controversial debates in European industry. Under discussion was the computer-implemented inventions (CII) directive – which was still being considered at the time of the discussion but in early July was thrown out by the European Parliament – and the Community patent proposal, as well as more general issues such as the Lisbon Strategy and the role of IP policy in improving Europe’s competitiveness, especially in the IT sector.

Several specific questions were identified for discussion, including: Does the Lisbon Strategy provide a practical framework for boosting Europe’s knowledge economy? How do EU IP policies affect Europe’s innovative position and capabilities in the IT sector? Should the Community patent be pursued or abandoned? What do we know about monopolies, competition and innovation in Europe?

## The demise of the CII directive

With regard to the CII directive, over the past few months, tons of words have been spilled over the damaging/beneficial effects of patenting computer and software-based technologies and on its implications for the European software industry. This debate, however, between supporters of open source and the code nation, seems to produce more heat than substance. This is by no means because the arguments and counter-arguments are shallow. On the contrary, it seems that each side has harnessed the entire history of human technological development to support his/her arguments.

However, a more detailed and less passionate analysis of the proposed text of February 2002 suggests two things. First, the proposed directive was essentially about harmonization – aiming to level the playing field of the EU patent system both at the regional and the national levels. Contrary to what has been perceived or portrayed in the media, the patenting of software-based inventions is common in Europe (though certainly less so than in the US). The European Patent Office (EPO) as well as national patent offices are allowed to grant patents to computer and software-implemented inventions. In the past decade and a half, patent applications in information

and communications technology have soared at the EPO: between 1991 and 2000, they grew by 9.5% (compared to a growth rate of 6.9% across all technologies). But, more than any other, this sector has also provoked controversy, with national offices and courts, and the EPO, taking different views on patentability, especially where computer programs are concerned. The Commission’s CII directive was designed to address these differences by harmonizing the rules for protection across Europe.

The major problem today is the large gap within Europe concerning the interpretation and application of the conditions of patentability of these technologies (an invention may be patentable provided it is new, involves an inventive step and is capable of industrial application). True, the proposed directive aimed to harmonize European legislation in such a way that the patenting of computer and software-based inventions will be made both easier and wider in Europe. However, this upward harmonization was intended to reflect the EU’s ambitions to maintain and improve its innovative position in the world.

As we all know, the highly vocal and visible campaigns for the implementation/abolition of the CII directive resulted in some confusing, as well as contradictory, amendments to the proposed directive. In the end it was impossible for the European Parliament to reconcile the opposing positions when it voted in July.

## Issues to be addressed

Despite the failure to adopt the CII directive, a number of issues were raised during the debates that still need to be addressed in Europe. These include whether the patent system is sufficiently accessible to smaller innovators, given the cost of protection and enforcement, and the perception among some that patents are merely an oppressive weapon used by multinational giants to suppress competition. The failure of the European institutions to agree on proposals for a Community-wide patent and enforcement system have exacerbated these concerns.

The roundtable discussion therefore considered both the specific arguments raised by the CII directive, as well as broader policy issues about how to encourage innovation in Europe and ensure fair competition, especially in the ICT sector. The 30 participants in the roundtable came from



Meir Pugatch

industry, academia and government and brought the perspectives of law, economics, politics and business.

The roundtable was held under Chatham House Rules: all participants could speak freely without the discussion being reported. However, some of them have agreed to contribute short articles on topics discussed in Brussels – such as the role of innovation in Europe, and the legacy of the CII directive – and these are printed on the following pages.

## Beyond the CII directive

**Ilias Konteas** of UNICE argues that, following the failure to agree on the CII directive, European industry wants more political support for IP rights and action to reduce the cost and improve the quality of patents

**T**he recent failure of the European Parliament and the EU Council of Ministers to agree on the proposed directive regarding the patentability of computer-implemented inventions together with the continuous inability of the EU to agree on the Community patent underscore the difficulty of making the case for IP protection in Europe.

The original aim of the Commission proposal for a directive on the patentability of computer-implemented inventions was to harmonize the way in which national patent laws deal with those inventions by permitting the patenting of certain

types of inventions involving the use of computer programs, providing they made a technical contribution and they met the normal patentability criteria of novelty, inventiveness and industrial applicability.

Building on the European Patent Convention (EPC), the case law of the EPO and the member states and the EU's obligations under the TRIPs Agreement, the proposed directive would provide uniform and clear conditions for the patentability of those inventions. Such inventions can already be patented by applying to either the EPO or the national patent offices of the member states, but the detailed conditions for patentability may vary.

European industry supported the proposal in order to achieve an unambiguous legal framework concerning the patentability of computer-implemented inventions, on the basis of long-standing European practice, to support Europe's innovation in new technologies and contribute to Europe's competitiveness.

### Impact on patent offices

After a three-year-long and fierce debate, the European Parliament's rejection of the Council's common position at the beginning of July 2005 brought this legislative proposal to an end. This means that this directive will not proceed any further and the current status quo in Europe will remain unchanged. Even though harmonization would be advantageous, adoption of a legal text that could diminish the current level of protection and re-open long-standing basic concepts of intellectual property protection would be detrimental to Europe's innovation. There is no doubt that this debate will have an impact on the granting practice of national patent offices and the EPO, as well as on national jurisprudence, as the recent *Halliburton* decision in the UK indicates.



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During this debate, much criticism focused on the quality of the patents issued by the EPO, the merits of patent versus copyright protection, the advantages of patent protection in particular for small and medium-sized enterprises (SMEs) and how SMEs can make use of the patent system.

Computer-implemented inventions can be found these days in a wide variety of inventions such as mobile phones, refrigerators and washing machines, DVD players, medical imaging equipment, anti-lock braking systems for cars and aircraft navigation systems. Innovation is based on effective protection of IP rights. By facilitating the development and commercialization of such applications, patent protection becomes a key incentive to innovate.

Patents give exclusive rights to a patent owner for a limited period of time preventing others from using the patented invention without his consent. At the same time, the details of the invention must be disclosed in a publicly-available document. This brings a beneficial result for society as a whole as the dissemination of scientific and technical knowledge supports technological progress.

In this context, it is of the utmost importance to ensure that European companies, in particular SMEs, can obtain protection for their innovations that is as cheap and easy as it is for their counterparts in the US and Japan. It is essential for Europe's innovation that legislators move beyond words.

### Expensive patent protection

There is no doubt that patent protection in Europe is expensive particularly when the cost of translations is taken into account. This is also why UNICE has consistently argued in favour of a Community patent corresponding to the needs of users in terms of costs, quality and legal certainty and favoured the one-language solution, namely English. In addition, UNICE has supported initiatives to reduce the costs of European patents by limiting translation requirements with the London Agreement on translation costs. Cost-effective patent protection would be especially advantageous for SMEs, as patents can be a key asset for them. Innovative SMEs can benefit from patent protection, since patents enable them to secure their R&D investments, standing their ground in competition through granting of licences, and to benefit from technology transfer.

Moreover, companies need high quality patents. The European patent system has checks and balances in place to filter through granted patents. Think, for instance, of opposition proceedings at the EPO. Granted patents can be opposed by anyone without requiring an economic or legal interest in the patent. In any case, European industry will continue to support efforts to further improve the quality of the patents granted in Europe.

It is time for an open debate with the European institutions and society on the role and value of intellectual property as a whole and UNICE is ready to participate and contribute on any initiatives in this direction. UNICE has always stressed the strategic importance of intellectual property for Europe's innovation and competitiveness. The recent example of the computer-implemented inventions directive further emphasizes the fact that in Europe intellectual property is still approached with reticence and even caution on occasions and without the same level of political support as in the US and Japan. National interests in some cases prevail. This needs to be changed. In this respect, the role of the European institutions is key, in particular the increasing involvement of the Parliament, and UNICE is intent on cooperating with them in order to address the misconceptions as to what is the added value of intellectual property.

# The future for CII patents in the EU

Following the failure of the CII directive, the debate on patenting software should take a new direction, argues **Federico Etro**, professor of economics at UCSC Milan and CEO of economic and financial consultancy ECG

During recent months, the EU has tried to complete a process of harmonization of the patent system for computer-implemented inventions (CIIs) with the aim of providing proper incentives to invest and innovate. After a long procedure, the Common Position adopted by the European Council in March 2005 proposed that CIIs be patentable when they provide a technical contribution to a field of technology. While this positive proposal simply re-affirmed the requirements already adopted in Europe for the past two decades and excluded from patentability any pure software, business methods and consulting practices, part of the European Parliament proposed a number of amendments aimed at radically changing the current situation excluding most of the innovations in information and communication technology from patentability (for instance, amendments which established vague definitions of technical contribution or field of technology were going to add significant restrictions on what could be patented). As a consequence of the confusing situation, the European Parliament ended up rejecting the directive in July 2005. While this stopped the introduction of the dangerous restrictions on patentability, there is still a need for a deeper harmonization of European patent systems (not just for CIIs) and the debate is likely to continue in the near future.

Unfortunately, the recent debate has been characterized by confusion about the role of patents in general and in particular in CIIs, largely created by the pressure of lobbies willing to extend the possibility of free imitation to new fields of technology. However, policy makers should always keep in mind that what matters is not the interest of this group rather than that of the innovative firms driving technological progress, but the interest of society as a whole, and in particular of current and future consumers who benefit from a higher rate of innovation.

### Strong rationale for CII patents

Mainstream economic theory (at least from the work of Joseph Schumpeter in the 1930s until the most recent research on the determinants of growth) is clear about the fundamental role of the protection of intellectual property rights through patents in promoting innovation, technological progress and growth, especially in high-tech sectors, which create general purpose technologies and hence are able to increase overall productivity in the economy. While the main social gain from all patents on CIIs is to promote innovation in the most dynamic sectors, the social cost, traditionally associated with the market power of patent owners, is smaller than for other patents since in these sectors competition mainly works through frequent price-reducing and quality-improving innovations. Hence, the rationale for patents on CIIs is even stronger than for other inventions.

Neglecting these traditional economic insights, opponents of the patent system have often claimed that patents stifle innovation. Unfortunately, even the evidence on the US expe-

rience does not support such a view. The extension of patent protection to software-related inventions started in 1980 (the first patent for a CII was granted by the USPTO in 1981) and it was associated with a clear increase in R&D investment during the 1980s. The R&D/sales ratio for US firms innovating in computer, telecommunications and electronic components (the relevant field for CIIs) increased from 5.5% to above 8% in 1989. Moreover, the works against patentability of CIIs did not compare investment in CIIs with investment in other technologies and did not take into account other (macroeconomic or sector-specific) factors. Hence there is no rigorous econometric evidence against patents which could be drawn from the American experience. Nevertheless a misleading interpretation of this research has created a lot of confusion in the debate.

## It would be helpful to establish institutional ways to provide financial, technical and administrative support to SMEs dealing with patents in the EU

Adopting a more balanced view in line with the theoretical and empirical findings of economic research, we can make the following suggestions for the future debate on rules for high-tech patents:

- additional restrictions to the patentability of CIIs would jeopardize investment in innovation and technological progress in the leading high-tech sectors of the European economy with negative consequences on growth and competition in the global economy and would shift investment toward the US and other countries where IP rights are better protected in a large and rapidly increasing number of sectors;
- new limitations on the enforcement of the patent system would open doors to foreign low cost productions (think of China) which, without patent protection, would be free to imitate European products even in high-tech sectors, with negative consequences on European employment and on innovative (and also non-innovative) SMEs;

## 648 MEPs out of 680 rejected the text, with only 18 voting for it

- improvements in the effectiveness of the current patent system for CIIs should promote access to patents especially for SMEs, who are traditionally less able to exploit this opportunity, to consolidate the European comparative advantage in high-tech sectors where innovation and human capital play a crucial role and to help achieve the goals of the EU Lisbon strategy. In this sense, it would be helpful to establish institutional ways to provide financial, technical and administrative support to SMEs dealing with patents in the EU;
- enhancement of the spillovers created by the patent system on the diffusion of knowledge could be obtained through further requirements on disclosure of the patented inventions that should be sufficiently clear and complete to be carried out by a person skilled in the art.

# Europe rejects the linguistic struggle

Uma Suthersanen, of Queen Mary, University of London, considers the lessons to be learned from Europe's failure to agree on the CII directive

**N**early every treatise and judgment in the last 20 years has declared that European patent law does not protect computer programs. In February 2002, the European

Commission drafted a directive on the patentability of computer-implemented inventions that sought to clarify this position by stating the following principles of law:

- 1) computer programs as such cannot constitute patentable inventions, irrespective of novelty or inventiveness;
- 2) computer-implemented inventions (CII), on the other hand, can constitute

patentable inventions as long as they are novel, inventive and make a technical contribution.

Spot the difference? Well, not many parliamentarians and lobbyists could and considerable delays and controversy ensued as the proposed directive was heavily amended so that more and more clarification was made to distinguish the two types of inventions. At its final stage, the European Parliament tabled 21 new amendments to the proposed directive. However, these were to no avail, and the directive was resolutely rejected by the Parliament at its second reading on July 6 2005.

Indeed, the numbers are astonishing: 648 MEPs out of 680 rejected the text, with only 18 voting for it. This is despite the fact that the pro-directive lobby apparently spent tens of millions of euros and took out full-page advertisements in the *European Voice* and *EU Reporter*, as opposed to the more modest anti-directive lobby who coordinated under the roof of the Foundation for a Free Information Infrastructure (FFII) and spent an estimated €100,000.

The European Commission has confirmed that it will not draw up another version of the CII directive.

### Political victory or policy disaster for Europe?

In broad policy terms, it is clear what this proposed legislation was about. The recent Enterprise Policy Scoreboard, published in 2004 by the European Commission, shows that the most innovative sector in the EU is electrical and optical equipment which tends to be driven by embedded software. The European Innovation Scoreboard 2004 also indicates an innovation gap between the US and Japan, on the one hand, and the EU (as a whole) on the other. This gap, interestingly, is explained by comparing three factors within the US and the EU research and economic infrastructure. One of these factors is the patent registration rate which shows a 50% patenting gap, with US high-tech patenting firms patenting seven times more in Europe than European firms patent in the US. Moreover, the European Commission reports that 50% of granted CII patents are held by US companies. This is a highly relevant fact if one accepts recent

studies which show that patents do operate for the benefit of SMEs, and that software patents create jobs.

Legally speaking, the rejected CII directive was an attempt to clarify the issue of software patents. The patentability of inventions in the EU is governed primarily by Article 52 of the European Patent Convention (EPC) that states that certain types of inventions, including computer programs, are excluded "as such". The Commission explained that the goal of the directive was to provide legal certainty to potential patentees by resolv-

## What matters more is good policy rather than semantic cul-de-sacs

ing the legal ambiguities concerning the ambit of Article 52 – that is what exactly is the difference between "computer programs as such" and "computer-implemented inventions". Related to the objective of legal certainty within Europe was the need to harmonize the divergent approaches to the issue of CII patenting of the national patent offices and the EPO.

### Word games

Is there really such a divergence within Europe? If there is, would not the proposed software patent directive have solved it?

It is undeniable that there is divergence between the German and British approaches. The UK Patent Office confirmed in the recent decision of *Franks's Application* that although UK law was governed by the EPC, in cases of conflict on the interpretation of the EPC, the UK Patent Office would follow British rather than EPO jurisprudence. There are views that the UK patent regime is the most liberalized regime in relation to CII patents compared to the German Patent Office which applies Article 52 strictly. The German office only issues patents for CII if the invention is part of a physical device. This divergence stems not so much from the differing national attitudes but rather from the wording of the EPC. In one sense, the failed CII directive was not aimed at introducing new legislation making computer software suddenly patentable but, as it stated, it was aimed at consolidating and codifying existing case law.

However, it is this very case law that lies at the heart of the debate and that led to an almost surreal linguistic debate between the supporters and detractors of the directive. On the

## IP protection cannot work in a vacuum or without support from educated and encouraging businesses

one hand, the written law is clear and no patent protection can be granted to computer programs. On the other hand, however, for the past 20 years the EPC has interpreted the law so as to grant patent protection to computer-implemented inventions. The rejected CII directive confirmed this by stating that CIIs are protected if they are new, inventive and are industrially applicable. The proposed directive sought to solve the debate by introducing for the first time in written statute a new criterion for the protection of one type of technology: CIIs must fulfil the criterion of technical contribution.

This notion of technical contribution probably caused the downfall of this directive – and it will continue to be a thorn in

future legislation concerning software patents. Throughout the lifetime of the proposed directive, several definitions of technical effect or technical contribution were floated. At one stage, the Council Common Position offered the following definition:

a contribution to the state of the art in a field of technology which is new and not obvious to a person skilled in the art. The technical contribution shall be assessed by consideration of the difference between the state of the art and the scope of the patent claim considered as a whole, which must comprise technical features, irrespective of whether or not these are accompanied by non-technical features.

The European Parliament countered the Council's definition by tabling another version on June 30 2005:

'technical contribution' means a contribution to the state of the art in a field of technology. The contribution is the set of features by which the scope of the patent claim as a whole is considered to differ from the state of the art. The contribution must be technical, that is, comprise technical features and belong to a field of technology. Without a technical contribution, there is no patentable subject-matter and no invention. The technical contribution must fulfil the conditions for patentability. In particular, it must be novel and not obvious to a person skilled in the art.

Indicative of the semantic stranglehold that "technical" had over this particular directive is the use of vague and inchoate terms such as technical contribution, technical features, field of technology, technical field. Moreover, the June 30 2005 parliamentary amendments added more new definitions of which the following are a sample:

- a "field of technology" is defined as a field of applied natural science;
- a "computer" is a realization of an abstract machine, consisting of entities such as processing units, storage space and interfaces for information exchange with external systems and human users;
- a "computer program" is a data-processing solution which, once it has been correctly described, can be executed by computer ("data processing" is defined as a calculation with abstract component entities of computers);
- the name of the directive is to be changed to "patentability of computer-aided inventions".

It is not surprising that this convolutedly written directive, with more than 100 amendments which nevertheless only focussed on a single issue, was finally rejected by the European Parliament.

### The needs of the European software industry

Another factor that probably led to the downfall of the proposed directive was that the debates did not focus on the right issue. The debates did not focus on whether the European software industry needed the directive, or whether the proposed directive ensured a balance between the freedom to innovate and the right to stop others free riding on another's innovation. Do CII patents stifle future innovation and creativity especially with respect to open or free source software? Do they create patent thickets and patent trolls (companies such as Acacia which acquire and license patented software and thus derive licensing incomes but do not actually develop software)? Looking to the US, is

there evidence that any of the 200,000 software patents issued in the US have been used to sue future innovators? Or do companies such as Microsoft employ patents as a defensive mechanism, whilst using the longer (and surprisingly robust) copyright law as an offensive mechanism? The amendments tabled by the European Parliament in relation to interoperability between different systems appeared to note this balancing exercise that must be done between past and future innovators. However, a majority of the amendments and debates descended into a rather pointless discussion on technologies and technical contribution.

This was made more futile when we recall that these terms do not appear in the European Patent Convention for a very good reason - they were rejected by the framers of the Convention from the outset as being untenable. If we dig deeper, we find that the concept of technical contribution/effect was introduced into German patent law in the late 19th century so as to prioritize industrial applicability over inventiveness and novelty.

### Future lessons

Perhaps the CII directive fiasco serves as a salutary lesson for future lobbyists and policy makers that at the end of the day what matters more is good policy rather than semantic cul-de-sacs. For instance, it is shocking that there was either lukewarm or no debate on these key policy points:

- Do we need dual protection under both patent and copyright laws considering that international copyright law was specifically amended in the TRIPs Agreement to include computer programs?
- Are software patents in the interest of the EU's industrial economy, and if patents for software (and business methods) are thought to be essential to our regional well-being, why are we not abolishing them from the list of excluded subject matter within Article 52? Historically, this list of exclusions was put into the draft Convention merely to ensure harmonization in the 1970s with the Patent Cooperation Treaty. Is not Article 52 a fictional provision, at odds with current technological developments?
- Do we need clarification, either from the EPO or in the future Community Patent Convention, of technical contribution? One should note that all policy and legal attempts to clarify or legislate in relation to software patents and Article 52 may also extend to the other prohibitions within Article 52 (the patenting of mental steps, discoveries and business methods).

There was always, from the beginning of the rejected directive's life, little official evidence or consultative documents from European stakeholders (electronics companies, local government authorities, patent attorneys and software developers) to show what improvements or developments such stakeholders saw as being vital to build a competitive and innovative society. IP protection cannot work in a vacuum or without support from educated and encouraging businesses. Indeed, it would have been more fruitful had the discussions concentrated not on whether certain fields of technologies should be patented, but on the quality of the patent system in relation to criteria of patentability, and on the accessibility of the system in terms of cost and priority.

# Why the Munich Convention must be reformed

**Philippe Simonnot**, director of the Observatoire Economique du Droit (Université de Versailles Saint-Quentin-en-Yvelines), says the ambiguity over software patentability arises from defects in the founding text of European patent law

**T**he Munich Convention, the founding text of the European Patent Office software patentability, is badly written, especially because it generates confusion by integrating software into the domain of ideas. Thus, we have the well-known expression that computer programs "as such" cannot be patented. This formula was reiterated by the Council of the European Union on March 7 2005.

However, it may be interesting to re-read Article 52 of the Munich Convention, which is still used as a reference in discussions on software patentability, from a lax and economics point of view:



Philippe Simonnot

- 1) European patents shall be granted for any inventions which are capable of industrial application, which are new and which involve an inventive step.
- 2) The following in particular shall not be regarded as inventions within the meaning of paragraph 1:
  - a) discoveries, scientific theories and mathematical methods;
  - b) aesthetic creations;
  - c) schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers;
  - d) presentations of information;
- 3) The provisions of paragraph 2 shall exclude the patentability of items listed in that provision only to the extent to which a European patent application or European patent relates to those items, considered as such.
- 4) Methods for treatment of the human or animal body by surgery or therapy and diagnostic methods practised on the human or animal body shall not be regarded as inventions which are capable of industrial application within the meaning of paragraph 1. This provision shall not apply to products, in particular substances or compositions, which are used to implement any of those methods.

### The ownership theory

If we want to find a rationale in this Prévert-like inventory, we should use the ownership theory arising out of the economic analysis of law rather than classical economic theory as a guide. Let us summarize beginning with the very interesting letter from Jefferson to McPherson on society's control over inventions referred to above. In this letter, we can read formulations which have gained celebrity status and which are going to spoil the debate on patentability: "The person who receives

an idea from me receives knowledge without weakening mine; similarly, the person who lights her candle with mine receives light without weakening hers." The so-called free-software community might well gain inspiration from this.

In contemporary terms, economists would translate Jefferson's letter as follows: "An idea is a good that is non-exclusive as well as non-competitive: non-exclusive because it is impossible to prevent a user from using it even if that user does not contribute to financing the good; non-competitive, because the consumption of an idea by an individual does not diminish the quantity that remains available to others."

## I plant roses in my garden. This garden is mine as well as the roses. Am I therefore the owner of their perfume, their beauty?

For contemporary economists, these two qualities of non-exclusivity and non-competitiveness represent what they call a collective good or a public good, and many conclude that this type of good can only be financed by the collective, even though we can easily demonstrate that private collective goods do exist in reality.

And we finally get to the following formula, which has also become commonplace: "Knowledge is a worldwide public good." Or else: "Any protection of intellectual property, whatever it may be, implies the privatization of knowledge which is part of humanity's common heritage."

Non-competitiveness has never prevented the commercialization of a product. Listening to music in a concert hall does not prevent the simultaneous enjoyment of another spectator. And yet there are private concert halls where private orchestras play with independent musicians.

The key point is exclusivity. The economic theory of ownership leads to the replacement of this term with "capacity of appropriation". A good is appropriable if the benefit derived from that appropriation exceeds the cost of such appropriation.

This is the same as to say that ownership is not self-evident. It arises when the cost/benefit balance described above is pos-

capable of appropriation. How could I patent something that does not belong to me? The problem with the common term is that it directs the thinking away from the question of ownership rights, which must be restated at the core of the discussion on the patentability of software programs.

Ideas are therefore not patentable, because they cannot be appropriated, and they cannot be appropriated because the cost/benefit balance of their appropriation would be negative. To reach that conclusion, there is no need to refer to great notions such as the heritage of humanity or the worldwide public good.

With that in mind, let us read again Article 52 of the Munich Convention. The exclusions in paragraph 2, subparagraph a, cover "discoveries, scientific theories and mathematical methods", which can be regarded as belonging to the world of ideas, thus incapable of appropriation, and consequently not patentable.

The exclusion in subparagraph b derives from another protection device, that of "models". The exclusions in subparagraph c, that is "schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers", rest on the same principle as those in subparagraph a. They also belong to the world of ideas, incapable of appropriation and therefore not patentable. Computer programs are included in this list by extension. They fit well in this list, and therefore belong to the world of objects, which are not capable of appropriation and therefore not patentable.

Subparagraph d follows the same rationale: what is less capable of appropriation than a piece of information? The Prévert-like inventory suddenly makes some sense.

Paragraph 3 however, is, more difficult to interpret. It qualifies the exclusions of paragraph 2. What is henceforth excluded from patentability is solely an item "considered as such". It is obvious that the expression does not only apply to computer programs. And it would be interesting to check whether this expression has been used for other fields than software. It seems to have been the case in the presentation of information and in games.

Nevertheless, we can read in paragraph 3 a willingness not to grant patentability to an item, which considered as such would belong to the realm of ideas that cannot be appropriated.

Paragraph 4 is based on a rather different rationale, which is that of the respect for life as such, whether human or animal. This rationale is beyond our topic. It lies on the rationale of exception or urgency,

which can have an economic justification. If patent considerations prevent saving someone's life, the loss is irremediable.

The wording of Article 52 is rather awkward and some refining is required. The little words "as such" are the source of legal confusion, uncertainty and insecurity. Back in December 1997, a roundtable organized by the Union of European Practitioners in Industrial Property ended with this conclusion:

- 1) the exclusion of "programs for computers" in Article 52 (2) European Patent Convention should be deleted or at least clarified; and
- 2) great efforts should be made to inform private inventors as well as small and medium-sized firms in Europe that patents are available for computer software.

## The wording of Article 52 is rather awkward and some refining is required

itive. For example, I plant roses in my garden. This garden is mine as well as the roses. Am I therefore the owner of their perfume, their beauty? If, by ownership I mean the capacity to exclude others from the consumption of my good, then I could not be the owner of that quality of my roses unless I erect a fence high enough to prevent passers-by from enjoying it. The cost of such a construction – and not only the cost of erecting the wall – is obviously prohibitive. Therefore I disseminate, and can do nothing but disseminate, in the public domain that quality of my roses. I am probably the legal owner. But I am not the economic owner, the possessor.

### A new look at Article 52

The first condition for any object to be patentable is to be

# Europe needs a more IP-friendly environment

The aim of the Lisbon Agenda is to make the EU the world's most competitive knowledge-based economy by 2010. In this context, **Anne Jensen** of the Stockholm Network examines the impact of the failure of the CII directive on SMEs

**F**ollowing the decision by the European Parliament on July 6 – to reject the Council Common Position on the computer implemented inventions directive (CII), questions have been raised as to whether knowledge-based small and medium-sized enterprises (SMEs) will pay for the decision.

Many SMEs are at the cutting edge of European innovation, which means that patent protection could be a make or break issue. With the rejection of the CII directive, the commercial survival of many knowledge-based SMEs has been challenged. Interestingly, this is in direct conflict with the Lisbon Agenda goals of making the EU the most competitive

and dynamic knowledge-based economy in the world by 2010.

## SMEs in Europe

The European Commission defines an SME as an enterprise with fewer than 250



Anne Jensen

employees and an annual turnover not exceeding €40 million. There is also a criterion of independence which states that “independent enterprises are those which are not owned as to 25% or more of the capital or the voting rights by one enterprise, or jointly by several enterprises, falling outside the definition of an SME or a small enterprise, whichever may apply”.

SMEs account for two-thirds of Europe's employment and almost 60% of economic output. In the US, SMEs are almost equally significant and comprise roughly 85% of business firms, 40% of employment and one-third of total economic output.

According to the World Intellectual Property Organization (WIPO), the protection of IP rights is particularly important to new technology-based firms (or NTBFs), “which are established for the purpose of commercializing new technology or providing an innovative service on the basis of new technology”. Such enterprises, WIPO argues, “generally have limited

capital and tangible assets and largely depend on intangible assets to succeed in the marketplace. The innovative idea is usually the main asset of the company during its start-up phase and the basis on which it will seek investors to take the product or service to market.”

Despite SMEs' initial suspicion of patents in general and the CII directive in particular, it seems now that knowledge-based SMEs especially have realized the benefits of security for their innovations and have therefore started supporting the development of a stronger European IP regime. Many SMEs are, however, still lacking the necessary awareness and ability to fully protect and exploit their IP assets.

Indeed, a study commissioned by DG Enterprise in 1999 aimed to investigate how SMEs involved in the development of software felt about IP rights. The results showed a rather low level of awareness of patents and how these could protect companies' inventions, which could help explain why some SMEs were hostile to the idea in the beginning. According to the study, patents were seen as “complex, expensive and difficult to enforce for small entities and therefore less valuable than copyright or informal means of protection”.

## Commitment to Lisbon

Two major obstacles facing SMEs are financing and enforcement. The cost alone of applying and maintaining a patent is estimated at about €50,000 (twice as much as in the US). SMEs are also at a disadvantage compared to large companies in the area of litigation and enforcement, because these companies are equipped with lawyers and the necessary budgets to fight in court. The time, costs and overall efforts that are often typical of IP disputes can deter SMEs from using IP rights as protection for their innovations.

As a result of the financial burden related to preventing infringement of existing patents, the UK Patent Office established a Patent Enforcement Project Working Group last year to investigate ways of assisting SME patent owners. The working group considered several models such as mutual insurance societies, the current IP insurance market, and commercial

## The establishment of a mutual insurance association would provide the best solution to the financial challenges faced by SME patent owners

companies that would invest in a patent by funding the cost of enforcement in return for a share of any settlement or damages award. The conclusion reached by the group was that the establishment of a mutual insurance association would provide the best solution to the financial challenges faced by SME patent owners. The mutual association would be funded by subscriptions and by capital from patent owners whom the association has successfully assisted in obtaining favourable settlements or damages in the past.

As SMEs are becoming more strategic in their approach to IP rights, European policy makers have an obligation to provide them with a more IP-friendly environment. Such policies should focus not only on harmonization of IP rights, but also on financial and technical assistance as suggested by the Patent Enforcement Project Working Group. This would send the signal that the EU is still committed to the Lisbon Agenda goals set out in 2000.

# CII failure provides an opportunity for Lisbon

**Jonathan Zuck**, president of the Association for Competitive Technology, says patent protection is as important for small innovators as for large ones

**W**hile the resolution of the five-year effort to harmonize patents for computer-implemented inventions (CII) in Europe is somewhat dissatisfying and anti-climactic in its ambiguity, it does afford an opportunity for reflection and allows us to peel back some of the layers of rhetoric that have obscured this important issue.

Political rhetoric and news reporting about the CII directive often portrayed the debate as large companies versus small ones. It was suggested that the directive would bring the end of SMEs in Europe as American giants patented them into extinction. This was a popular theory, but it could not be further from the truth.

The real debate was between those companies focused on innovation and those focused on simple production. Producers protect their investments with a good lock, traditional property rights and, in some instances, copyright. They have no need for patents and usually look at them as nothing more than a hindrance to their businesses.

On the other hand, innovators of all sizes need patents. Those businesses, large or small, whose core value is innovation, simply need patent protection. Their capital investment is not in building a production facility but in gathering intelligence, trying different solutions and perfecting an idea to the point where we call it an invention.

In fact, small innovators need patents even more than their bigger brethren because they have fewer ancillary advantages in a competitive market. Big businesses often have the means of production, large promotional budgets and access to multiple efficient distribution channels. There are three reasons why patents are critical for small innovators to compete with larger firms.

## Why patents are critical

First, patents facilitate access to capital. When a venture capitalist looks at a new enterprise, the second question they ask is whether the idea is patentable. The second issue has to do with larger companies. Just taking an invention to a large company can result in a bad outcome. Armed with a patent, however, larger firms are forced to take smaller companies more seriously.

Finally, the value of patents to smaller innovators is that they offer a degree of flexibility in business models. Patents allow an SME to be in the business of innovation through licensing without having to compete with larger firms on production. Biotech firms invest millions only to produce a recipe for a new drug that is then licensed to a drugs company. The

same is true in the software sector for technologies such as digital rights management, video compression and streaming media. The inventors are generally not the ones bringing products to market but they are still playing an invaluable role.

Of course, like any economic policy, the patent system here in Europe is not without its imperfections. There are many who would like to make sure that the experience of the USPTO is not repeated in Europe. With the boom market of the 1990s safely behind us, it is fairly unlikely we will see a repeat of the overwhelming number of patent applications. Furthermore, the European system is already more rigorous than the US system which should assuage many fears.

Yet some of the weaker patents (where the cost to production is greater than the benefit to innovation) to come out of the EPO of late have been computer-implemented inventions. This has led some to suggest a prohibition of patents on all computer-implemented inventions, especially those on pure software. It is certainly one way to eliminate software patents that we do not like, but I cannot think of a worse idea. There are certainly some weak software patents but software has no monopoly on such patents.

There is a rather famous US example of a patent on a peanut butter and jelly sandwich with the crust cut off. Clearly, this is not an invention deserving protection. One solution would be a ban on patents involving bread. A few moments, consideration and it is clear this solution would prohibit patents on preservatives, production methods and a whole host of truly innovative inventions related to bread. Similarly, there are many important patents in the software field including those for video compression, voice recognition and image analysis for medical devices.

The solution lies in a higher standard for patent quality, not restrictions on categories of patentability. Criteria for a good patent already exist and should be applied across categories. Is the invention new, non-obvious and does it make a contribution to the state of the art? The bad software patents that are often discussed are simply bad patents because they fail to meet the criteria above. Instead of focusing on banning patentability of categories of technology, we should be discussing how to provide appropriate oversight on patent quality to the EPO. In addition, we should be looking into ways to expand the databases and participation in prior art searches and make challenging applications and grants easier.

Fundamentally SME participants in the patent system, whether innovator or producer, need accessibility and predictability. Innovators applying for patents need the system to be straightforward, costs to be reasonable and quality to be reliable. Producers need to be able to object to patents that they believe to be illegitimate in terms of their lack of newness or their obviousness and to be able to rely on the system to minimize the number of nuisance patents granted. Producers, large and small, are generally willing to license critical inventions to leverage the R&D of others but they do not want to be stymied by silly ones.

As the dust clears from the CII debate, it is clear that this issue is far from over. Compromises need to be made and improvements should be sought, but the starting point must be an understanding that the patent system is essential to innovation and to innovators, large and small.



Jonathon Zuck

# Promoting IP in Europe

**Justyna Oegalska-Trybalska and Dariusz Kasprzycki**, of the Intellectual Property Law Institute of the Jagiellonian University and IPR-Helpdesk, explain how European companies can find advice on protecting and exploiting their IP rights

In the global, competitive, knowledge-based economy, innovative technologies and products play a key role. Increasingly, successful businesses know how to protect and commercialize their own intangible property and also know how to make lawful use of someone else's work. Therefore familiarity with the rules of IP protection and its economic exploitation is an issue of paramount importance. In a competitive environment, IP laws help strengthen the position of a business in the market. This happens thanks to the fundamental principle of IP-exclusivity. An entrepreneur enjoying the exclusive right to use a specific good is free to make decisions about the way it is commercially exploited and the sale of products implementing the protected solution, and he also decides whether the rights can be extended to a third person and if so to what extent. All of these actions should bring a measurable financial benefit to the rights owner. IP rights allow the protection of those intangible assets whose value is difficult to establish such as, for example, the enterprise's reputation.

In this light, actions designed to aid entrepreneurs with innovation, in the context of IP rights, become very important. One of the EU's projects in this area, which was set up by the European Commission DG Enterprise and Industry, is IPR-Helpdesk, and we would like to examine this in more detail. The IPR-Helpdesk project has been specifically mentioned in the Strategy for the Enforcement of Intellectual Property Rights in third countries as a project aiming at supporting creativity and innovation. Therefore it may give guidance to, for example, companies facing violations of their rights. The purpose of the IPR-Helpdesk is not however to handle complaints but to provide information to European industry, which it does with a helpline, website, regular newsletter, bi-monthly bulletin and by offering training.

Intangible property can be classified according to various criteria. Most commonly it is divided into intellectual property (proper) and industrial property. Intellectual human creations of unique and original character, known as works (and subject to related laws), fall into the first category. The second category comprises goods that have an innovative solution (inventions, utility models and industrial designs), goods which make products and services distinguishable in the

course of trade (trade marks, geographical indications) and indications used by entrepreneurs and their enterprises that distinguish them in the market (trade names and other commercial designations). In addition, due to technological and economic development, the following have fallen under the label of intellectual property: integrated circuit topography; computer programs (enjoying the same protection as works protected by copyright); new varieties of plants; databases; technological, organizational and trade secrets of enterprises (know-how); and fighting unfair competition.

## Lisbon and the ERA

The IPR-Helpdesk activities cover a wide area, so its importance with regard to all innovative activities is even greater. In accordance with the Lisbon strategy (launched in 2000), these innovative activities should create an internal market for science and technology, called a European Research Area (ERA).

The main purpose of IPR-Helpdesk is to provide assistance with regard to IP rights. The project is designed for current and potential participants in research and technological development (RTD) projects carried out within EU framework programmes. It is worth stressing that these programmes are the main EU instruments for research funding in Europe and will help the European Research Area to become real. Yet the broad IPR-Helpdesk project formula makes numerous services, such as the website and the helpline service, available to anybody interested. All of the project services are free of charge. In addition, all services are offered in six languages.

Naturally the subject that takes priority in IPR-Helpdesk

services is the EU 6th Framework Programme. The project offers help in preparing a project proposal, and, in the negotiation phase, in formulating the specific provisions with regard to IP in the consortium agreements and further stages of project implementation.

The IPR-Helpdesk project is run by an international consortium comprising the University of Alicante (Spain), the Intellectual Property Law Institute of the Jagiellonian University (Poland) and the European Research and Project Office GmbH

(Germany). The University of Alicante coordinates the IPR-Helpdesk project, being in charge of the RTD part of it. The issues strictly related to IP rights fall to the Intellectual Property Law Institute of the Jagiellonian University. The Institute also manages the Representative Office in Brussels, which has been set up to enable co-operation with the top European institutions in the fields of IP, RTD and innovation. Another partner in the project is the European Research and Project Office GmbH (EURICE), a spin-off of the University of Saarland.

In a global, dynamic economy IP plays an increasingly important role. Effective running of a business in a competitive market (especially an international one) cannot take place without addressing IP issues. Knowing the rules of protection of IP rights and their commercial use is especially important for small and medium-sized enterprises that do not have qualified staff or expert legal advisors, and the IPR-Helpdesk project aims to provide the assistance they require.



The roundtable discussion in Brussels