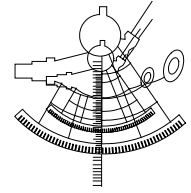


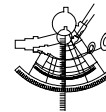
# European Trend Chart on Innovation



Thematic Report

IPR: “Strategic Patenting”

Covering period: October 2002 – March 2003



Innovation is a priority of all Member States and of the European Commission. Throughout Europe, hundreds of policy measures and support schemes aimed at innovation have been implemented or are under preparation. The diversity of these measures and schemes reflects the diversity of the framework conditions, cultural preferences and political priorities in the Member States. The 'First Action Plan for Innovation in Europe', launched by the European Commission in 1996, provided for the first time a common analytical and political framework for innovation policy in Europe.

Building upon the Action Plan, the *Trend Chart on Innovation in Europe* is a practical tool for innovation organisation and scheme managers in Europe. Run by the Innovation Directorate of DG Enterprise, it pursues the collection, regular updating and analysis of information on innovation policies at national and Community level, with a focus on innovation finance; setting up and developing innovative businesses; the protection of intellectual property rights; and the transfer of technology between research and industry.

The Trend Chart serves the "open policy co-ordination approach" laid down by the Lisbon Council in March 2000. It supports organisation and scheme managers in Europe with summarised and concise information and statistics on innovation policies, performances and trends in the European Union. It is also a European forum for benchmarking and the exchange of good practices in the area of innovation policy.

### The Trend Chart products

The Trend Chart on Innovation has been running since January 2000. It tracks innovation policy developments in all EU Member States, plus Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Iceland, Israel, Latvia, Liechtenstein, Lithuania, Norway, Poland, Romania, Slovak Republic and Slovenia. The Trend Chart website ([www.cordis.lu/trendchart](http://www.cordis.lu/trendchart)) will provide access to the following services and publications, as they become available:

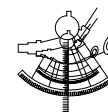
- a database of policy measures across Europe;
- a "who is who?" of agencies and government departments involved in innovation;
- a series of six-monthly country reports for all countries covered;
- a series of six-monthly trend reports covered on each of the four main themes;
- a number of benchmarking reports;
- the European Innovation Scoreboard and other statistical reports;
- a news service and thematic papers;
- the annual reports of the Trend Chart.

The present report was prepared by **Paul Cunningham and Marco Jaso, PREST, University of Manchester**. The information contained in this report has not been validated in detail by either the Member States or the European Commission.

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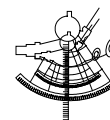
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### Executive Summary

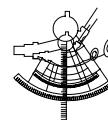
This report sets out to identify general trends within the activities of the EU Member States and accession countries in the area of “strategic patenting” within the broader field of Intellectual Property Rights (IPR) and innovation as part of the Trend Chart. The report presents the current picture of developments within the period Sept 2001 – Oct 2002.

“Strategic patenting” is an important new trend in IPR, although this term is frequently misunderstood. The legal function of a patent is to provide firms with protection against infringement of a patented invention that the firm intends to commercialise or license. Strategic patenting, however, covers patent strategies that are used by firms to expand the function of patents, such as defensive and offensive patenting. Firms may patent *defensively* to prevent other firms from patenting their inventions, even if they do not need to protect their IPR. Conversely, firms patent *offensively* to prevent other firms from patenting similar, possibly competitive, inventions. Both strategies are of policy concern because they can decrease economic efficiency, although this is open to debate.

Although potentially undesirable by-products of patent legislation, both types of strategic patenting are generally beyond the reach of policy. Thus, this report does not specifically identify policies that are relevant to strategic patenting. Nevertheless, three new trends in patenting are of indirect relevance to strategic patenting. Extension of patent rights (Section 2) and restrictions on the fair use exemption (Section 3) open up new opportunities for strategic patenting, while strategic patenting could increase the costs associated with patent infringement (Section 4).

With regard to the extension of patent rights, many European countries, both within and outside the EU, base their policies on, or are heavily influenced by European legislation in the area. Some countries, e.g. the UK, Luxembourg, are in the process of debating certain aspects of this patenting policy. In the specific area of biotechnological patenting, certain countries are opposed to the patenting of gene sequences (especially human gene sequences) on ethical grounds (Austria, France, Spain), whilst others have implemented, in part or in whole, the EU Directive 98/44/EC on legal protection of biotechnological inventions. The picture is also quite variable with regard to software patenting. However, few countries permit the patenting of business methods.

Few EU and associate countries have introduced policies to enforce the fair use exemption, even in the area of public sector research, whilst the topic appears to play a negligible role in innovation policy debate in the accession countries. It appears that national courts across the EU tend to recognise the public policy underlying patents, namely to encourage research and not provide a mechanism for one party to obstruct it. A lack of case law, even in EU countries where there are large numbers of patent disputes, could indicate that the operation of the exception is not an issue. However, recent reports (from the UK IPR Commission, and the Nuffield Bioethics Committee) have raised concerns about the impact of patents on “research tools” in the biotechnology area. There is also some policy discussion amongst OECD countries on open access to publicly funded databases.

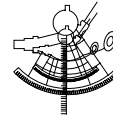


There appear to be few measures in place to reduce the costs of litigation over patent infringement, particularly to SMEs. Most policies which exist in this area within the EU15+ seem to be concerned with the use of special courts dealing with patent infringement cases. Only in Slovenia, amongst the accession countries, is there any evidence of a specialist patent court.

Most information campaigns operated by national governments are aimed at the stimulation of patenting by the major innovation actors, including companies, SMEs, entrepreneurs, inventors, research institutes, universities, etc. The breadth or specificity of this targeting essentially depends on the general level of patenting activity in the country in question. Hence, in the accession countries campaigns tend to focus on companies and SMEs, whilst in the EU, universities and public research institutes tend to attract greater attention. Only in Sweden was any evidence found for information campaigns that provided information to SMEs on how to avoid the dangers of strategic patenting by their competitors.

The final section of the report deals with patenting by public research organisations, an issue that is not related to strategic patenting, but is nonetheless a very important new trend in patent policy. Here it appears that the encouragement of public research organisations and higher education institutions to engage in patenting activity is widespread across the EU15+, with a number of countries adopting specific policies and measures aimed at this objective. These actions appear to fall into three major categories: changes to the legal framework concerning the ownership of IPR in these institutes; information and intermediation services; and general stimulation/awareness-raising activities. Activity in accession countries is less pronounced, although some countries are attempting to promote patenting within the academic and public research sectors.

Overall, it appears that the issue of strategic patenting does not occupy a major position in innovation policy discussion and implementation across Europe, although there are signs that aspects of it are beginning to attract greater attention.



## 'IPR: Strategic Patenting'

### 1. Introduction

This report sets out to identify general trends within the activities of the EU Member States and accession countries in the field of Intellectual Property Rights (IPR) and innovation, more specifically on the issue of "Strategic Patenting". The report is based on information provided by the members of the network of Innovation Correspondents run as part of the Trend Chart project of DG Enterprise. Reported developments relate to the situation during the period October 2002 to March 2003.

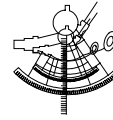
An important new trend in IPR is "strategic patenting", although this term is frequently misunderstood. The legal function of a patent is to provide firms with protection against infringement of a patented invention that the firm intends to commercialise or license. Strategic patenting, however, covers patent strategies that are used by firms to expand the function of patents, such as defensive and offensive patenting.

Thus, a firm patents defensively to stop other firms from patenting its invention, even though the firm does not need a patent itself in order to earn a return on its investment in innovation. The firm earns a return through non-IPR appropriation methods. A variation of defensive patenting is when a firm patents its inventions so that it has patents that it can trade with other firms.

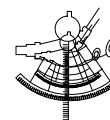
In contrast, firms patent offensively to prevent other firms from patenting inventions that are similar, but not identical, to the invention that they plan to commercialise. In this case, the firm builds a patent family or "wall" around its invention. This prevents other firms from commercialising competitive products, even though the firm does not intend to market these other products itself.

Both defensive and offensive patenting are of policy concern because they can decrease economic efficiency. Defensive patenting can increase costs to firms (via the patent preparation, application, and defence costs) without producing any real financial benefits. Offensive patenting could reduce the rate of technological progress by blocking competitors from areas of research and increase consumer costs by reducing competition.

It can be argued that defensive patenting may well be of financial benefit to firms. Whilst they may not currently be seeking a return from a line of R&D, if a competitor subsequently patents in their area it may close off their options for future R&D. Hence, they may miss out on the opportunity to profit and thus patent, not to close out competitors, but to keep their own options open. Research by the UK National Institute of Economic and Social Research indicates that this is a consideration for large science and engineering based companies (D. Humphry, DTI).



Although potentially undesirable by-products of patent legislation, both types of strategic patenting are generally beyond the reach of policy. For this reason, this report does not specifically identify policies that are relevant to strategic patenting. Nevertheless, three new trends in patenting, described below, are of indirect relevance to strategic patenting. Extension of patent rights (Section two) and restrictions on the fair use exemption (Section three) open up new opportunities for strategic patenting, while strategic patenting could increase the costs associated with patent infringement (Section four). Section five examines the role of information campaigns to promote patenting with regard to the discussion of problems with strategic patenting. Finally, Section six, deals with patenting by public research organisations, an issue that is not related to strategic patenting, but is nonetheless a very important new trend in patent policy.



### 2. Extension of patent rights

The United States of America has extended patent rights to new areas, such as gene sequences, software, and business methods. Europe has been under pressure to follow suit. Some of these extensions, particularly to gene sequences, create opportunities for offensive patenting, such as when a firm patents multiple gene sequences without a clear idea of what they are for.

This section examines whether EU Member States, association countries and accession states possess national policies or occupy a position on the extension of patent rights to new areas, including:

- Gene sequences (expressed sequence tags, single nucleotide polymorphisms, etc);
- Software;
- Business methods;
- Other areas.

#### 2.1 EU Member States and associate states

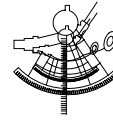
Owing to the variable quality of information provided, it is difficult to present a comprehensive picture of the situation across Europe. From the available information it seems that, overall, policy tends to be relatively varied on this particular issue. There is a tendency, however, exhibited by several countries, to adopt or follow EU legislation and guidelines, although there are also variations according to the specific area of patenting. Countries that appear to follow EU policy in all patenting areas include Finland, Germany, the Netherlands and Portugal, generally in the context of the creation of a Joint European Patent.

In Belgium, an official Government 'policy orientation note' submitted to the Federal Council of Ministers by the Minister for Scientific Research and the Commission for Scientific Policy in July 2000, appears to deal only with encouraging the number of patent requests through a the reduction of costs as well as a move to on-line registration; none of the issues on the extension of patent rights were mentioned in this policy orientation note. Similarly, in Greece there are no explicit policies, but in general the national policy allies with EU directives, whilst in Italy the revision of the national policy is still in progress.

Also at the general level, the UK Patent Office has just completed a consultation on the extension of patents to new areas such as software and new ways of doing business<sup>1</sup>. In autumn 2002, the Patent Office published a consultation leaflet inviting views on how far computer software and ways of doing business should be protectable by patents. With regard to software, the government's conclusion was to reaffirm the principle that patents are for technological innovations. Software should not be patentable where there is no technological innovation, and technological innovations should not cease to be patentable merely because the innovation lies in software. However, the government agrees that at present the law is not clear

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<sup>1</sup> See: <http://www.patent.gov.uk/about/consultations/conclusions.htm>



enough, and that this is damaging. Clarification is needed. This raises complex and technical questions, but the central difficulty can be expressed simply: how to define the boundary determining when software is, and is not, part of a technological innovation, so that what is patentable will be clear in specific cases in future. The government intends to take this matter up with its partners in the European Union and the European Patent Convention as a matter of urgency. With regard to business methods, the government's conclusion is that those who favour some form of patentability have not provided the necessary evidence that it would be likely to increase innovation. Unless and until that evidence is available, ways of doing business should remain unpatentable.

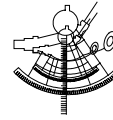
It should be noted that patent law is generally framed to be technology-neutral – the WTO TRIPs Agreement requires patents to be available for inventions in all fields of technology. Patent protection will automatically cover inventions in any new field of technology, provided the general patentability considerations (novelty, inventive step, industrial applicability) are met.

### ***2.1.1 Biotechnology patenting***

Concerning biotechnology, Austria has a very critical position on patenting. According to Austrian patent law, it is possible to patent inventions with genetically modified micro-organisms, cell-lines, plants and animals. However, human gene sequences can be patented only in connection with a concrete application. Austria stopped the ratification of the European directive on biotechnology and genetic engineering with its wider possibility of patenting “biological material” in 2000. The Austrian Commission on Bioethics underlined its recommendation to the Austrian government to refuse ratification once again in April 2002 and demanded new negotiations on the directive on a European level. The new government committed itself to the ratification of the directive after discussing it once again in the framework of a parliamentary work-group. The programme “Genau” (AT 59), an initiative supported by the Ministry for Education, Science and Culture, was initiated with the goal to inform a broader public about biotechnology and genetic engineering. From the legal point of view, the development is still on hold. The new government (in office since 28 February 2003) committed itself to the ratification of the European directive after discussing it once again in the framework of a parliamentary work-group.

The French and Spanish governments both adopt similar positions regarding gene sequences, and are opposed to patenting for ethical reasons.

Under Act no 412/31.05.2000, Denmark has implemented the EU Directive 98/44/EC on legal protection of biotechnological inventions, as has Ireland (Statutory Instrument 247/2000). However, it should be noted that the Directive disallows, with some exceptions, the patenting of gene sequences. The UK has also implemented this Directive into UK law (this generally reflects earlier UK practice); the criterion of industrial applicability effectively excludes patents for sequences whose utility is not known.



The patenting of genes, plants or animals is not accepted in Norway, and the reluctance to do so is great. However, the Norwegian Parliament's EEA Committee (for the European Economic Area) decided on 31 January 2003 to accept the EU Parliament directive 98/44/EF on judicial protection of biotechnological inventions. This directive allows patenting of genes, microorganisms and cells. The Norwegian constitution requires that Parliament must decide on the acceptance of this directive. The government has proposed that Parliament accept the directive (against the vote of the cabinet members from the Christians People's Party), although the government would like to interpret the directive in a restrictive way. The proposal has now been sent to various institutions for comments<sup>2</sup>.

In Luxembourg, debate has been initiated in Parliament about the possibility to extend the patent to the gene sequence. A law project has been discussed but for the moment only the first part of the law – which does not include this sensitive issue – has been adopted. The Netherlands has also conducting a study into the possible consequences of patenting human gene sequences.

According to the Swedish IP regulations, a new patent demands a technical solution to a problem. In some cases the IP regulation could be extended to areas as gene manipulation within biotechnology, but each case is considered on the basis of if it is a technical solution to a problem.

Under Israeli law, plant or animal variations can be patented only if they do not originate from living varieties, whilst large nucleotides and amino acid sequence listings are patentable.

### **2.1.2 Software patenting**

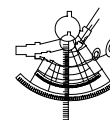
On the issue of software patenting, the Danish position is to codify existing legal practices, and Denmark supports the European Commission's proposal for a directive on the patentability of computer implemented inventions (Com (2002) 92). Ireland and the Netherlands also support this common position and the UK is in negotiation on this issue – its position is as stated on the Patent Office website.

Conversely, Austrian Patent Law (§1 chapter 2 and 3) excludes software from patent protection, but the application of a technical solution in a concrete application can be patented. The source code is protected worldwide by copyright; the algorithms of programmes can be protected by a so-called "Gebrauchsmuster" (petty patent or utility model). However, there is a problem in that the model of "Gebrauchsmuster" does not exist in Germany; hence the protection of algorithms can therefore not be extended.

Both the French and Spanish systems of IPR exclude software (art. 52 of the Munich Convention), but since 1984 (in France) and 1996 (in Spain – Law of Intellectual Property Rights) there has been an opportunity, through the copyright system, to

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<sup>2</sup> See: <http://www.odin.dep.no/jd/norsk/publ/stprp/012005-030003/index-dok000-b-n-a.html>, and: <http://odin.dep.no/jd/norsk/publ/hoeringsnotater/012041-080040/index-dok000-b-n-a.html>



protect the content of software. However, the system is moving towards the possibility of patenting software. It is now possible to patent “hardware + software” as a whole. Norwegian law follows art. 52 of the EPC (even though Norway is not an EPC signatory), and software cannot be protected through patents, although it is considered an intellectual property right. The situation is identical in Luxembourg. In Israel, software may only be patented as part of a device.

### **2.1.3 Patenting of business methods**

Business methods cannot be patented in Austria, the Netherlands, Norway and Israel, and Denmark is opposed to the extension of patent rights to the area of business methods. In France, only industrial and biotechnology processes are included in the patent rights system.

Ireland is a signatory of the European Patent Convention which currently does not cover patent rights protection to business methods.

### **2.2 Accession countries**

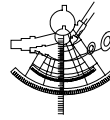
Again, as in the case of the EU15+, there seems to be a high level of variability in national practices across the accession countries.

Those where patent legislation does not extend to the specific areas listed above include Bulgaria, Estonia, Latvia, Lithuania.

Some further clarification is required however. For example, in Estonia, national policy on this issue depends on the European Patent Office policies. In other words if the EPO extends patent rights to these new areas, then Estonia will follow suit. The Latvian Copyright Law, 2000 does not protect ideas, methods, processes and mathematical concepts and Latvian Patent Law does not provide the protection of software as such. However, specific processes related to software are subject to protection i.e. software of a technological character (specific process oriented). Overall, the Patent Law of 1999 mentions all of the above areas as NOT being protected by the law.

Lithuania has a classic patenting policy and patenting, for areas such as gene sequencing, software, and business methods, has not been discussed. The Law on Patents (1994) explicitly excludes software and business methods from patentable objects (inventions). Although the patent law was revised in 2000 and there were discussions on patent protection for gene sequences, for the present they are not protected. In Poland, software is protected by the Law on Authors' Rights and not by Patent Law. Likewise, business methods are not protected as such under the law, but some aspects of the business can be protected by Patent Law or Authors' Law (e.g. trade mark for a range of products or services strictly defined in the applications).

According to the Slovenian Intellectual Property Office (SIPO), yearly patent applications are around 400, a volume that does not warrant policy diverging from that of the European Union's. At present, Slovenian patent laws are completely harmonised with the European Patent Convention (EPC) and the European Patent Office (EPO). There is little national patent policy debate, nor is there a position, but rather the policy tendency is to maintain harmonisation with the EPC. While the



patent laws were extended to cover the software industry<sup>3</sup> to provide for an incentive framework for a domestic industry, it presently does not cover business methods or gene sequences *per se*. Romania has extended the patent rights to software. The Law 8/1996 regarding the copyrights for software programs was revised in 2003 following pressure from the industry because according to Datamonitor, the market survey company that measures the damages inflicted by software piracy, software makers incurred losses of €17.3 million in 2002. Business Software Alliance, the international organisation in charge of pursuing copyright policy both worldwide and in Romania hopes to cut piracy rates by some 5% during 2002. Furthermore, the Romanian Law 64/1991 regarding patent rights was revised in October 2002 so as align it with EU legislation regarding the patent rights.

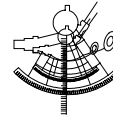
According to the Hungarian Law of 1995 on the Protection of Inventions by Patents<sup>4</sup>, there is no difference between new and old technologies. Generally according to the Hungarian law, patents shall be granted for any inventions which are new, involve an inventive activity and are susceptible of industrial application.

Finally, Czech IP regulation extends to the categories of gene sequencing and software and in Slovakia, patent rights have been extended to the field of software and ICT.

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<sup>3</sup> Within the context of the EPC, which dictates software is patentable only if it possesses an idiosyncratic 'technical' feature.

<sup>4</sup> [Law No. XXXIII of 1995 on the Protection of Inventions by Patents](#) Article 1



### 3. Restrictions on the fair use exemption

Widespread patenting of near basic research in biotechnology, health applications, and possibly nanotechnology could be confusing the boundary between research with commercial and non-commercial applications. If true, this could make it difficult for both firms and public research institutes to claim a fair use or research exemption that allows patent infringement for basic research, thereby extending the potential for offensive patenting. There are concerns, for example, that public research organisations are unable to fully use this exemption because the boundaries between basic research and applied research are unclear. This could be particularly true in biotechnology and in nanotechnology.

#### 3.1 Policy actions to enforce the fair use exemption

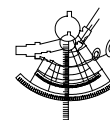
##### *3.1.1 EU Member States and associate states*

It appears that few countries have introduced policy actions to enforce the fair use exemption, even in regard of public sector research.

No evidence of any policy action could be found in Austria, Belgium, Finland, France, Greece, Iceland, Italy (where policy is under revision), Luxembourg, Portugal, Spain or Sweden. It was noted that the concept of 'fair use exemption' does not really exist in Danish Patent Legislation, under which the patentee obtains an exclusive right to the commercial utilisation of his invention. This right does not encompass actions carried out (by others) for non-commercial purposes. Ireland has not introduced any policy actions to enforce fair use exemptions because of the small size of the Irish public research system and the small number of private sector companies undertaking near-basic research in Ireland. Section 42 of the Irish Patents Act, 1992, limits the rights conferred by patents for acts done privately for non-commercial purposes and acts done for experimental purposes relating to the subject matter of the relevant patent invention. Since the introduction of this Act, there has been no record of any litigation on this section of the Act.

The situation is not as clear in Germany: in April 2002, the BMBF, the BMWA and the BMJ (Federal Ministry of Justice) announced a joint statement in favour of a grace period for patents: "The introduction of a grace period requires a joint European approach. Irrespective of the situation under international law, it would not seem expedient for any one country to try and go it alone because protection of the invention in other European countries, which is indispensable in many cases, would not be possible. Furthermore, in the interest of inventors an international grace period would be desirable. Europe should abandon the position taken during WIPO negotiations, which blocks any progress in the matter, and actively support the introduction of a grace period in European patent law". Today, the German position is equivalent to the decision of the EU Competitiveness Council from 3 March 2003, on creating a Joint European Patent.

A handful of countries do report some application of fair use exemption. In Israel, patent infringement is allowed for experimental activities – even as preparation for licensing. There is no restriction of this situation to basic research. Current Dutch patent legislation (Rijksoctrooiwet) already includes a type of fair use exemption



("onderzoeks exemptie") and Norway has a researcher's exemption in its Patent Law (§ 3.3.3). This allows researchers to perform experiments related to the invention in spite of its patent protection. The exemption only applies to the right to research on the invention itself, not to the commercial use of the invention in other research.

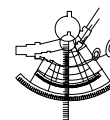
The research exemption (although for copyright) is found in Section 60(5) of the UK Patents Act 1977, aligned with Article 27(b) of the Community patent convention. Further details are given in the UK manual of patent practice, available on the Patent Office website. Case law is not extensive but national courts across the EU have taken a similar approach, recognising the public policy underlying patents, namely to encourage research and not provide a mechanism for one party to obstruct it. The lack of case law, even in EU countries where there are large numbers of patent disputes, could indicate that the operation of the exception is not an issue. However, two recent reports have raised concerns about the impact of patents on "research tools" in the biotechnology area (from the IPR Commission, <http://www.iprcommission.org/>, and "The ethics of patenting DNA" at <http://www.nuffieldbioethic.org/>). There is also some policy discussion amongst OECD countries on open access to publicly funded databases.

### **3.1.2 Accession countries**

No policy actions to support the use of the fair use exemption have been reported in the Czech Republic, Estonia, Latvia, Poland, Slovakia and Slovenia. Further details are available for other countries.

In 2001, the Bulgarian Advisory Council adopted internal rules for the organisation of its work and set up two working groups with the task of studying the opportunities for simplifying existing problems with the Patent Tax Law. Although two amendments were introduced in 2002, there are no provisions regarding the fair use exemption. Likewise, although the Hungarian authorities, particularly the Hungarian Patent Office [www.hpo.hu](http://www.hpo.hu), regularly monitor international (US, Japan and the EU) experiences regarding contemporary issues in industrial property protection, there are no actions to enforce the fair use exemption for public sector research. In Lithuania, the Law on Patents allows for the use of patented objects for private, experimental or research purposes only if it does not unjustifiably infringe the rights of the patent holder and does not prevent the use of the patent in a regular way. However, no policy actions have been taken which would address the enforcement of fair use exemption for public sector research. Similarly, in Slovenia there is presently no policy enforcing the fair use exemption. The position of the SIPO (Slovenian Patent Office) is that the IPR belong to the 'inventor', regardless of the source of funding. In case such 'inventor' is a public/private entity, the SIPO in no way interferes in the distribution of rights among the different participants.

The only example where the fair use exemption is used is in Romania, where the Matnantech Programme (RO 16), a new programme initiated in 2002, a component of the National Plan for Research, Development and Innovation 2001 – 2005, refers to new materials, micro- and nano-technologies. Moreover, a chapter is dedicated to the protection of intellectual property rights. In essence, the Matnantech programme was introduced to enforce the fair use exemption, particularly for public sector research. The Biotech Programme (RO 15), also a new component of the national



plan for RDI 2001 – 2005, refers to biotechnologies and includes a chapter regarding Intellectual Property protection.

### **3.2 Clarification of fair use exemption application**

There is very little evidence that national governments have taken action to clarify the use of the fair use exemption. This, however, is largely due to the fact that it does not form a relevant area for policy attention (see preceding section).

The only reference to any action can be found in Germany where the BMBF has commissioned a study on the introduction of a grace period in patent law, comparing the USA and Germany. The study was published in 2002 and showed that the introduction of such a grace period is highly likely to have a positive effect on the number of patent applications by public research institutions.

In the accession countries, no evidence could be found of any action intended to clarify the fair use exemption, with the sole exemption of the Czech Republic. Here, whilst there is still no evidence of such policy, the government does view it as an important focus of future policy.

### **3.3 Policy discussion**

#### **3.3.1 EU 15+**

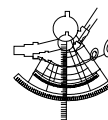
As the issue of strategic patenting, including the issue of fair use exemptions, do not form major elements of innovation strategy in most European countries, the level of policy discussion is minimal. Where there is discussion of patent issues, for example, in Germany and Sweden, most of this tends to focus on the decision of the EU Competitiveness Council from 3 March 2003, on creating a Joint European Patent.

Similarly, it is recognised that, in international comparisons, Austria performs poorly concerning the numbers of patent applications, especially patent applications by public research institutions. Until now, IPRs have belonged to the employer (in the case of universities the Republic of Austria). The new law on University Organisation (UG 2002) for the first time includes regulations how the institution itself can participate in the inventions of its researchers. Therefore, discussion now concentrates on more basic questions, such as an information campaign for universities or the establishment of new consultative and marketing agencies<sup>5</sup>. Questions like fair use or research exemption for basic research, however, are not part of the Austrian discussion. The situation is similar in the Netherlands where the issue forms part of the broader discussion on technology transfer policy (i.e. a more professional use of patents is seen as a way to achieve better use of public research).

In Greece, similarly, discussion of this specialist issue is limited to the research community. In Norway, Government Proposition St prp nr 43 (see above) discusses the consequences of EU Parliament directive 98/44/EF for basic science. The Directive does not mention the fair use exemption. Nevertheless, the Norwegian

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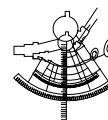
<sup>5</sup> See the recommendation adopted by the Council for Research and Technology on 14 Feb 2003, on "Marketing of Research & Development: Intellectual Property Rights and Patents", available at: <http://www.rat-fte.at/> only in German.



Government argues that the Directive is not aimed at developing a total harmonisation of Patent Law in the biotechnology area, meaning that Norway may keep its exemption. However, the government does not propose to increase the area protected by the exemption clause.

### **3.3.2 Accession countries**

The use of the fair use exemption does not appear to be a feature of policy debate on IPR issues in the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland and the Slovak Republic. In Bulgaria and Romania, a certain amount of legislation is to be adopted under the *acquis* directives, and significant progress has been made concerning RDI legislation. However, full harmonisation will only be achieved in 2004, and it will take time for the implementation of the fair use exemption. Lastly, during policy discussions on the focus of the future Slovenian research programme, attention was drawn to the low levels of patenting by public research institutes and the universities. Within this discussion framework, the question of fair use of exemption was also raised as an area where more policy discussion is needed in the future.



### 4. IPR Infringement

One side-effect of the 'pro-patent' era and strategic patenting is an increase in litigation over patent infringement. This can increase costs to all firms, but particularly to SMEs that lack the financial resources to defend their patents against infringement by a larger competitor.

#### 4.1 Reduction of costs of litigation

##### 4.1.1 EU 15+

Policies dealing with the reduction of costs of litigation arising from patent infringement can include:

- Expert court for patent infringement cases;
- Subsidies for litigation insurance (particularly for SMEs);
- Policies to 'level the playing field' between SMEs and large firms;
- Support for voluntary patent pools or other methods for reducing conflict.

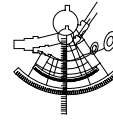
In addition, such policies may have specific target groups.

Policies within the EU15+ appear to be targeted at the use of special courts for patent infringement cases and at SMEs, while policy discussion has highlighted the issue of litigation insurance.

Thus, in the UK there are specialist courts for patent infringement cases, namely the Patents Court and the Patents County Court, which is currently reviewing its procedures (see [www.courtservice.gov.uk](http://www.courtservice.gov.uk)). Moreover, if parties agree, infringement cases can be heard by the Comptroller of the Patent Office. Although there are no policies in Ireland which have the effect of reducing the costs of patent infringement litigation, Forfás, the national policy and advisory board for enterprise, trade, science, technology and innovation in Ireland, produced a report in 2002 on eBusiness. One of the report's recommendations was that a special court should be created similar to the Patents Court in the UK to deal with information technology laws, eBusiness and intellectual property law.

In Finland, one department of the City Court of Helsinki specialises in patent cases, but litigation there does not differ from normal procedures. In Italy, Article 16 of the Law No. 273 of 12 December 2002 specifically empowers the government to take measures to speed up legal proceedings relating to intellectual property. For this purpose, the government has six months to order the creation of, in several major districts, courts of specialised sections having jurisdiction on national and Community trademarks, patents, plant breeders' rights, utility models, designs, copyright and unfair competition relating to industrial and intellectual property.

In France, the specific target groups for this type of policy are the SMEs. Concrete action by the government in these cases targets the competence of the courts and also focuses on enhancing the level of sanctions against the pirates.



The issue of litigation costs reduction does seem to be an issue for policy discussion in a limited number of countries.

In Denmark, there has been a political debate on the issue of insurance schemes for patents. There seems to be a general political consensus in favour of a European-based solution. This is also the position of the Danish Government. A national scheme relying on subsidies is not believed to be a viable solution.

The French November 2002 Plan for IPR<sup>6</sup> suggests two main actions to tackle this issue:

- 1) To enhance the professionalism of the competent courts. This would reduce the number of competent courts (one to three by regions) and increase the number of magistrates in each. Improved IPR training for these magistrates will also be implemented and recourse to thematic experts will be encouraged;
- 2) To increase the severity of sanctions against IPR 'pirates' with the creation of an inter-ministerial work group with responsibility for evaluating realistic damages. The legal environment will also be modified in order to account for organised clusters of patent infringers. Lastly, the illegal profit of the 'pirates' will also be taken into account when determining sanctions.

There has been little or no policy discussion in Ireland on IPR infringement. The Forfás eBusiness report has, however, drawn attention to the need to develop judicial competence in Ireland to deal with information technology, eBusiness and intellectual law.

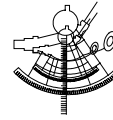
In the Netherlands, there is an expert court which deals with patent infringement and although there are currently no specific groups that are targeted, the Ministry of Economy is conducting a study on the barriers for SMEs to make use of patents. Within this issue, the costs of litigation could provide such a barrier.

Policy discussion in Sweden concerns the issue of how to reduce the expenses for patent application and maintenance. Although insurance for patent infringement against SMEs formerly existed, it was withdrawn because it was considered to be too expensive for the insurance companies.

The issue of insurance has also been discussed in the UK. Following the Quinquennial Review of the Patent Office (concluded in early 2001), one of the recommendations was that the Patent Office adopt a wider role in relation to enforcement. Alongside recognition of the importance of intellectual property rights is the belief that enforcement is difficult and can undermine the benefits conferred by rights. There is currently a high level of discussion of this issue. The aim of a 2002 Enforcement Roundtable was to identify possible practical steps that could be taken to resolve the main areas of problems and weaknesses. One view expressed was

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<sup>6</sup> "La propriété industrielle, outil de valorisation des entreprises – Plan en faveur de la propriété industrielle", 28 novembre 2002, Ministry of Industry : [http://www.industrie.gouv.fr/infopres/presse/propriete\\_industrielle.pdf](http://www.industrie.gouv.fr/infopres/presse/propriete_industrielle.pdf)



that IP insurance had evolved from insurance covering general legal expenses and was intended to provide adequate limits and cover more than UK actions. The product is still evolving and insurers are continually making improvements. There are a number of case studies which show how effective insurance can be but it is important that potential users are more aware of what is involved. The insurance industry is committed to better service and work with stakeholders in achieving this. The Roundtable did not reach any clear conclusions on the question of IP insurance. Various schemes exist (a link to a list of current providers will be provided once it is available), but they have not been widely adopted. Patent insurance (particularly the development of an EU scheme) was also one of the themes of a conference held by the Danish Patent Office<sup>7</sup>.

### **4.1.2 Accession countries**

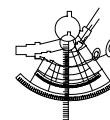
The only evidence from the accession countries relating to this issue concerns Slovenia. Here the Slovenian Patent Office (SIPO) has established an expert court for patent cases, arbitrating on the ownership of patents. However, at present, SIPO's position is that the government should not interfere with inter-company patent infringement cases and the expert court does not adjudicate on patent infringement. Given the level of patent applications in Slovenia, while the court has been active in resolving patent ownership issues, there is very little need for infringement arbitration.

In Bulgaria and Hungary, there is some support (i.e. deferred/reduced patent fees) for patenting by small firms, individual inventors, academic institutions, etc., but no support for litigation/infringement expenses.

Overall, debate on patenting in the accession countries generally tends to focus on the low levels of patenting and on measures to encourage an increase in this activity. One exemption can be found in Romania, where, about four years ago, copyright infringement accounted for as much as 90% of the entire software market. As the IT sector grew and local business became stronger, the industry lobby put pressure on the government to crack down on illegal copies of copyright sales. As a result, software piracy rates dropped 1-2% in 2002 compared to 75% in 2001. Business Software Alliance, the international organisation that is in charge of pursuing copyright policy both worldwide and in Romania, hopes to trim piracy rates by some five percent in 2003. Industry has helped push through legislation to amend the two relevant acts, Act 8/1996, the framework copyright law, and Government Ordinance 202/2002, which updates legislation to the latest provisions as outlined in the global TRIPS treaty (the WTO's copyright instrument to discipline countries that condone copyright infringement).

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<sup>7</sup> General information about enforcement of IPR is available on the UK IP Portal ([www.intellectual-property.gov.uk](http://www.intellectual-property.gov.uk)); a consultation exercise on possible enforcement measures in the Patents Act (Amendment) Bill has just been completed ([www.patent.gov.uk/about/consultations/patact/index.htm](http://www.patent.gov.uk/about/consultations/patact/index.htm)).



### 5 Information campaigns

Most information campaigns are designed to encourage firms, particularly SMEs, to patent more.

#### 5.1 Avoidance of competitors' strategic patenting

##### 5.1.1 EU 15+

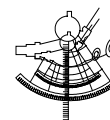
This section looks at whether information campaigns, such as education materials, etc., include information on how SMEs can avoid the dangers of strategic patenting by their competitors. As noted above, the issue of 'strategic patenting' does not figure highly in policy discussion, thus the following analysis focuses on broader IPR campaigns operated by national governments. One important exception is Sweden where there have been campaigns aimed at SMEs that have included information of how SMEs can avoid the dangers of strategic patenting by their competitors. At the moment, the Swedish Patent and Registration Offices (PRV) together with SIC (Innovation centre Foundation) and ALMI are planning a new campaign that deals with the issue.

In Austria, most information campaigns attempt to target universities and public research institutions. The only initiative on patent-law and IPRs exclusively targeting SMEs is "Techinform", a consulting service provided by the Austrian Federal Economic Chamber, which assists firms in questions of patenting and research of already existing patent applications (<http://www.techinform.at/>). The Austrian Innovation Relay Centres (<http://www.bit.or.at/irca/>) provide information for research institutions and enterprises on technology co-operation and – in this framework – on questions of patenting and IPR. The Austrian Innovation Agency (AT 45) addresses research institutions and SMEs, but its main focus is universities and public research institutions. Information on the danger of strategic patenting by competitors are not part of the activities of the named services centres.

The Finnish National Board of Patents and Registration is active in the production of IPR education material. TEKES also produces a range of booklets. However, there are no campaigns organised by public authorities.

A large-scale information campaign was started in 2003 by the French National Institute for IPR (INPI). This campaign focuses on two issues: Measures countering infringement, and the importance of IPR advisers and their role. The French Ministry of Industry and the Ministry of Research and New Technologies also undertake widespread communication concerning IPR as a tool to develop firms and as a tool to help 'technology watch' activities. In this regard, the objective of the government is to promote an "IPR culture" within firms and research centres.

Although no information on this specific point was found in any written material in Germany, the relevant measures, notably INSTI (DE 24), rest on an individual consulting approach. Firms are invited to contact patent information centres (DE 07) where they can receive qualified support for their specific questions. It is thus highly likely that the experts at the patent information centres provide SMEs with information on how they can avoid the dangers of strategic patenting by their competitors.



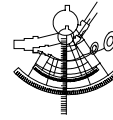
In Ireland, there have been no information campaigns to inform SMEs of the dangers of the use of strategic patenting by their competitors and the information campaigns that have been organised seek simply to encourage SMEs to make use of patenting. However, the Intellectual Property Unit within the Department of Enterprise, Trade and Employment is giving consideration to organising a campaign to inform companies of the advantage of patenting.

In Luxembourg, Luxinnovation, the Ministry of Economy, and the Technological Watch Centre are participating in the LIIP project (Linking Innovation and Industrial Property). This European project has the objective of promoting the importance of patenting to enterprises, particularly SMEs. The project will lead to the production of a CD-Rom, practical guides, and a national platform where enterprises will be able to ask questions related to IPR.

Information campaigns in the Netherlands also follow the same general pattern in that they are aimed at making SMEs aware of the fact that they can make more and better use of their knowledge, that they can exploit knowledge and that patenting is one of the ways to do that.

The Norwegian Patent Office (Styret for det industrielle rettsvern, <http://www.patentstyret.no/english/>) arranges courses and takes part in conferences, including presenting patent practices. The overall objective is to stimulate patent applications from Norwegian applicants. In 2001, the Patent Office carried out a systematic information campaign vis-à-vis small companies in the counties of Nordland and Akershus. However, the organisation has decided to make use of more general instruments for information dissemination in the future, including various media and industry branch organisations. The Patent Office has been involved in competence development measures in the Research Council of Norway, but not in SND. None of this material or campaigns include specific information on how SMEs can avoid the dangers of strategic patenting by their competitors. However, the topic may be raised by other organisations assisting companies in their innovation activities. This applies to advice from science parks, incubators, the Research Council of Norway and SND. Also relevant is the fact that the Research Council of Norway has initiated an IPR forum where all the relevant stakeholders are represented.

The Spanish Patent Office (OEPM) has launched information campaigns to encourage firms to patent their inventions, but these do not include information about the issue of strategic patenting. The number of patent applications is low in Spain and the main concern of authorities is how to improve the general Spanish innovation culture. Thus advice to public and private agents generally concerns the importance of invention patenting as a competitive tool. It should also be noted that the SME policy (which includes **ES 22** and **ES 27** measures) is designed to push the adoption of innovations in these firms. However, it does not pay attention specifically to patenting, let alone strategic patenting.



No examples have been found which refer to strategic patenting in the UK. However, a wide range of options in terms of “patent strategies” are presented to SME audiences at seminars and in press articles from government sources, particularly the Patent Office.

### **5.1.2 Accession countries**

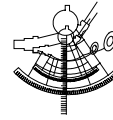
As noted above, the main area of policy concern in the accession countries is in regard to the low level of patenting activity exhibited by the main R&D actors, particularly SMEs. As a result, most information campaigns that exist tend to target this objective rather than the more esoteric aspects of patenting strategies.

In Estonia there are few educational initiatives on IPR issues. Although there have been few public campaigns on SME patenting in Hungary, the Hungarian Science and Technology Foundation ([www.tetalap.hu](http://www.tetalap.hu)) as well as the Hungarian Patent Office ([www.hpo.hu](http://www.hpo.hu)) regularly organise national and international conferences addressing science policy and management, including IPR issues.

The Patent Office of Bulgaria organises limited campaigns promoting IPR legislation and raising awareness regarding developments in the field of intellectual property and to encourage firms to patent more. The Patent Office also organises events in order to increase awareness regarding intellectual property. These are only general campaigns, which include educational materials, leaflets, and publications for SMEs, etc.

In Lithuania, although there are extensive and effective information campaigns designed to stimulate the formation and activities of SMEs, these do not include information on how SMEs avoid the dangers of strategic patenting by their competitors. Likewise, in Romania, the campaigns to encourage firms to patent more do not include specific information on how SMEs or any other company should avoid the danger of strategic patenting by their competitors. Overall, these campaigns only include general educational materials, leaflets, and publications for SMEs, etc. The OSIM (State Office for Trade Marks) runs continuous campaigns to promote legislation and inform of developments in the field of intellectual property on its website ([www.osim.ro](http://www.osim.ro)). It also aims to encourage increased patenting by Romanian firms and organises events in order to raise awareness about the topic of intellectual property.

The Slovenian Patent Office (SIPO) provides an infrastructure to facilitate patenting in Slovenia. The patent database is available both on the Internet and locally at SIPO headquarters. Furthermore, SIPO holds educational seminars on the patent application process, IPR legislation (ownership and infringement issues), both at its headquarters and in conjunction with the Chamber of Commerce of Slovenia, at each regional office of the Chamber of Commerce. There are approximately six to seven seminars each year, rotating among the 13 regional Chambers of Commerce. The issue of strategic patenting is not covered *per se* in those seminars.



### 6 IPR and public research

A common belief is that firms will be unable to commercialise inventions discovered by public research institutes without patent rights. These rights give the firm an incentive to invest in the invention in order to develop it into a market-ready form. Without patent rights, no firm will invest, resulting in social welfare losses.

#### 6.1 Encouragement of patenting by public research organisations and universities

##### 6.1.1 EU 15+

The encouragement of public research organisations and higher education institutions to engage in patenting activity appears to be widespread across the EU15+. A number of countries have adopted specific policies and measures aimed at this encouragement. These actions appear to fall into three major categories: changes to the legal framework concerning the ownership of IPR in these institutes; information and intermediation services; and general stimulation/awareness-raising activities. All types are detailed below.

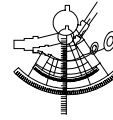
In Austria, actions are currently taken on two levels: At the strategic level, the Council for Research and Technology adopted, on 14 February 2003, a recommendation on “Marketing of Research & Development: Intellectual Property Rights and Patents”. This concentrates on how to encourage universities and public research institutes to use their new right to participate in inventions made by their researchers (the legal basis for this right is the amended law on University Organisation - UG 2002). In this context, the Council recommends the following initiatives:

- Stimulation and motivation: Researchers should be encouraged by a set of financial and non-financial measures (e.g. release from daily work and extra time for the work on inventions, a bonus-system for inventions, advantages for the professional advancement of a researcher etc.);
- Building-up of know-how: Implementation of transfer-centres at universities with the tasks of:
  - consulting researchers in all questions concerning patenting and IPR;
  - organising training for researchers and information campaigns to raise the awareness of IPR.
- Marketing agencies: Closely cooperating with or even integrated in the transfer-centres. These should serve as links between universities and the private sector and support researchers in finding commercial partners.

To implement this infrastructure, the Council has requested a start-up budget to be provided by the Ministry for Economic Affairs and Labour.

In addition, the Austrian Innovation Agency (AT 45) runs the following activities at universities and public research institutes:

- regular road shows and workshops on IPR;
- the establishment of so-called “Inventors’ Consultants” at the universities.



In Denmark, as of January 2000, universities and other public research institutions have been able to take over the rights to inventions of their employees and negotiate terms of rights with companies. In return, the institutions are obliged to promote the commercial use of these inventions.

Finnish public financiers expect universities and public research organisations to patent inventions and to grant royalty-bearing licenses to companies having participated in a publicly-funded research project where the invention was made. A new legal proposal will enable universities to have ownership right for inventions generated by their personnel. Most Finnish universities have set up internal consulting services and hired 'invention advisors' to assist researchers in innovation issues. However, specific policies supporting the commercialisation of research vary between universities and public research organisations. For instance, VTT, Helsinki University of Technology and the University of Oulu have adopted a more rigorous IPR strategy while many other universities and public research organisations are still in the learning phase.

Beyond the introduction of awareness-raising actions, the main French policy aimed at the encouragement of patenting is the opportunity for a university or a research organisation to create a SAIC (industrial and commercial service) which can make the most of patents and licences, and market the products of its activities.

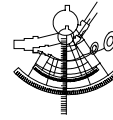
The issue of public sector patenting is a major concern of innovation policy in Germany, and several measures have been introduced recently. First, the patent regulation at universities was changed. The "teacher's exception", which was in place up until 2001, was abolished in 2002. From then, IP at universities became the property of the institution (see DE 59). In order to strengthen the use of IPR at universities and other public research organisations, a network of patent and IP commercialisation offices for public research institutions was implemented in 2002 (see DE 72). Furthermore, the sub-measure IPV (information on patenting and commercialisation of IP) supports information activities at universities in order to inform researchers about the utilisation of IPR.

In addition, within the INSTI programme, several awareness measures and supporting programmes are offered (see DE 48). The sub-measure InWert gives support to lectures on the use of IPR and IPR related practical work by students, whilst the INSTI Innovation Action (DE 24) is also open to members of public research organisations.

In Greece, individual universities and research centres cover the patenting costs for patents emerging from in-house research.

The Icelandic Research Council has been active in the promotion of patenting and offers favoured treatment to R&D funding applications where patenting is foreseen. It also offers small grants for the novelty of patent potential of R&D results.

Although there are no specific policies in existence in Ireland to encourage patenting by public research organisations or universities, the Irish Council for Science,



Technology and Innovation has been researching issues relating to the use of intellectual property for competitive advantage and a statement from the Council is expected shortly.

Whilst there are no policies to encourage patenting by public research organisations and universities in Israel, these organisations exhibit considerable patenting activity through affiliates charged with commercialisation of their research results.

In Italy, the One Hundred Days Programme (28 June 2001) foresees some important changes in the general discipline concerning patents for industrial inventions. These changes aim to stimulate research activity by providing the authors of such inventions – who act as employees of the Universities or the Public administrations – with the all the rights coming from the invention, including a quota of the proceeds from the industrial exploitation of the invention.

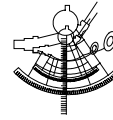
An element of Dutch innovation policy concerns the encouragement of universities to make better use of their knowledge. Although there is a focus on the improved use of knowledge, and that patenting is one of the ways to achieve this, alternative approaches are also emphasised.

As noted above, the Research Council of Norway has initiated an IPR forum where all the relevant stakeholders are represented. In 2000, the Norwegian Ministry of Trade and Industry reduced of application fees for small firms in order to encourage them to patent. This measure entailed a 20% reduction in the application fee for enterprises of 20 employees or less, including independent applicants. In addition, this applicant group is now exempt from the examination fee that was recently implemented. The examination fee will affect medium-sized companies, but will be refunded in all cases should the application be withdrawn.

In Portugal, the two main instruments affecting this issue were the launch of SIUPI (PT 18) and the creation of the GAPI network (PT 26). However, neither of these focuses exclusively on public research organisations or universities.

Several relevant measures have been introduced in Spain, for example, when a public university is the applicant in a patent, it is exempt from the payment of fees during the national phase. A new development concerns the Royal Decree 55/2002, 18 January (published on B.O.E. n° 26, 30/01/2002), which established that researchers from public research bodies (OPIs) will be able to take part of the profits obtained as a consequence of commercial exploitation or cession of industrial property rights for their inventions.

The financial support to the development of non-profit Technology Transfer Office (OTRI), (ES 10), mentioned above, has not yet exerted any influence on the number of patent applications from public research organisations and universities. However, it would be expected that the initiative should help to encourage researchers to patent more.

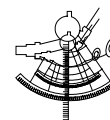


According to Swedish law, researchers at universities keep the ownership of patents. This constitutes an exception from the general regulation on patents on ideas developed by employees. This specific exception is currently under debate, but at the moment no changes to the policy are planned.

The UK Government believes that “knowledge transfer, which includes intellectual property as a key component, improves the contribution of publicly funded science to wealth creation and jobs, and ensures the productive use of government assets”. Thus there are several schemes designed to stimulate the transfer of research results from the public sector to industry. While less attention is paid to the encouragement of patenting by such organisations, a number of specific schemes do exist. For example, some £10 million (€16 million) was awarded under the umbrella of the PSRE Fund (UK 52) in 2001-02. Of this total, £4 million (€6.3 million) was used to establish a seed fund and the remainder funded 14 consortia of PSREs and over 30 NHS Trusts to develop their capacities in knowledge transfer.

The National Audit Office (NAO), the UK Parliament’s government spending watchdog, undertook a survey of the success of PSREs in commercialising their science. The report, *Delivering the Commercialisation of Public Sector Science* was commissioned in 1999 after the government agreed that institutions could keep the proceeds of commercialisation rather than transfer them to the treasury. The NAO looked at the experience of a number of research councils and associated establishments, and concluded that progress had been made in capturing more of the economic and social benefits of publicly funded scientific research. The report’s recommendations include: research establishments should analyse the potential of their intellectual property in a systematic way (the aim of which is to manage patent costs effectively and to help estimate approximate differences of potential value between projects); they should review and set minimum levels of training in commercialisation; and each Research Council should review its budget for ‘proof of principal funding’ to improve the prospects for commercialisation by funding the gap between scientific discovery and an initial proposal to prospective private sector partners. In particular, the Medical Research Council (MRC) was praised for its success in generating income from the IP arising out of its research institutes. The income generated from such activities has grown from £150,000 (€240,000) in 1986-87 to £17.9 million (over €28 million) in 2000-01.

The Ministry of Defence (MoD) has also announced the creation of a new range of Defence Technology Centres (DTCs), of which six may eventually be funded, to carry out research into defence science and technology. The DTCs will focus on specific research areas and will attempt to work in collaboration with academia. The details of the arrangements under which the centres will work and the identity of prospective partner organisations are not currently known. However, the DTCs are likely to involve consortia and the MoD will part fund the work carried within them. It appears that those taking a stake in the DTCs will be able to gain access to the IP they generate, giving opportunities for further exploitation of ideas and concepts in both defence and civilian applications. In addition, a dedicated science and innovation unit will be established in DTI in support of the commercialisation of research by PSREs.



There are also a number of enterprise initiatives specifically aimed at universities, namely the Higher Education Innovation Fund (UK 38); Science Enterprise Challenge (UK 21 – now amalgamated with UK 38); University Challenge (UK 11 – now amalgamated with UK 38); University Innovation Centres.

### **6.1.2 Accession countries**

At a general level, Bulgaria co-operates with the World Intellectual Property Organisation (WIPO) to modernise its intellectual property system with the purpose of increasing the competitiveness of SMEs, industry, R&D and other organisations. The results of this cooperation should be that entrepreneurs, including those in the public sector, are more aware of this intellectual property system and that the share of patents increases. As an illustration, in 2001, over half of the number of registered patents belonged to members of the Bulgarian Academy of Sciences.

In Estonia, universities themselves encourage and promote patenting. Hence, public policy involves only university spin-offs through the SPINNO programme (ET 17), which trains researchers on IPR issues.

In 2002, the R&D Division of the Hungarian Ministry of Education introduced a survey to collect data and information about the R&D situation (number of researchers, research mobility, patenting, EU Sixth Framework Programme participation, etc) of the public research organisations, universities and institutions. After collecting and assessing the answers, the Ministry of Education was in a position to introduce further measures and programmes encouraging public organisations to become more innovative, including increasing their patenting activities<sup>8</sup>.

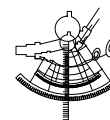
While there are no policies in Latvia to encourage patenting by public research organisations and universities, there is evidence that some patenting is taking place in the scientific community. A list of such inventions can be found on the Latvia Academy of Science website <http://inventions.lza.lv/latv/izgudrotaji/>.

Some positive action is reported from Romania, where Law 64/October 2002 regarding patenting, encourages patenting by public research and universities by offering a 50% deduction for the registration taxes to the State Office for Trade Marks.

The policy situation is slightly more complex in Slovenia. There is currently no systematic policy encouraging the patenting of research results at public research institutes or universities. The University of Ljubljana, the country's largest academic body, does not have an office of technology transfer which could facilitate the costly and somewhat complicated patent application process. As a result, most of the country's academic researchers' incentives are almost exclusively geared towards publication. SIPO does periodically hold seminars at the country's two largest institutes, the Chemical Institute and the Jozef Stefan Institute, to foster interest in

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<sup>8</sup> The questionnaire can be found at: <http://www.irg.bme.hu/felmeres/>



patenting among researchers. However, funding for research projects comes from public budgets and the current (November 2002) Law on Research and Development does allow research teams with pre-competitive research projects to apply for public funding. As opposed to teams oriented to basic research, which are evaluated by their published work, the number of pending patents is one of the criteria in the evaluation of 'pre-competitive' research teams and their eligibility for public funding. Thus, implicitly, the number and significance of pending patents will influence the funding of research teams, providing an incentive to register patents.

No policies aiming to encourage patenting by public sector research bodies were reported for the Czech Republic, Lithuania, Poland or the Slovak Republic.

### **6.2 Guidelines/rules for licensing public IP**

This section examines whether national governments have introduced guidelines or rules for the licensing of public IP, and whether this is on an exclusive versus non-exclusive basis.

#### **6.2.1 EU 15+**

In Denmark, in connection with the implementation of the Act on inventions at public research institutions (see above), five patent consortia were established to support the work on patenting and to create increased co-operation between public research and companies. The five consortia are organised as cross-institutional networks specialised within their respective fields. The patent consortia represent universities, sector research institutions and university hospitals. Together the consortia have established a joint Internet portal ([www.techtrans.dk](http://www.techtrans.dk)). According to the patent consortia, it is only in exceptional cases that institutions should be licensing on an exclusive basis, and only if it is financially and research strategically well-founded.

In Finland there are a number of commercial publications describing EC Competition Rules and also literature on IPR strategy and licensing. However, there is no special need for any "official" licensing guidelines.

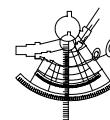
A set of guidelines was published by the French Ministry of Research in June 2001. This states that the valorisation of the results of public research must:

- be based on a climate of professionalism and mutual confidence in relations with relevant companies;
- guarantee the visibility of the results of public research, the recognition of the teams and the opportunity to obtain new research contracts;
- guarantee the traceability of the inventions, both in respect of the industrialists and the research organisations;
- ensure the remuneration of the publicly-owned higher education and research establishments, and motivate the teams by profit-sharing;
- contribute to the attractiveness of the area despite international competition<sup>9</sup>.

In Germany, guidelines for licensing public IP vary from institution to institution. For IP resulting from joint research between public research institutions and firms that are funded under the BMBF technology programmes (DE 67 to DE 71, including

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<sup>9</sup> See: [ftp://trf.education.gouv.fr/pub/rechtec/technologie/charte.rtf](http://trf.education.gouv.fr/pub/rechtec/technologie/charte.rtf)



Lead Projects - DE 25), the partners are obliged to set up a contractual agreement on how to use any IP resulting from the joint research. There are some general suggestions about what such an agreement may look like, but these are not guidelines, and they do not determine whether licenses should be given on an exclusive or non-exclusive basis.

Similarly, there are not any government guidelines or rules for licensing public IP on an exclusive versus non-exclusive basis in Greece; every institution negotiates the specific conditions on a case-by-case basis.

In 2000, the UK government's White Paper "Excellence and Opportunity - A Science and Innovation Policy for the 21st Century", and the government's response to the Baker Report, which was published alongside the Science and Innovation White Paper, announced the government's intention to develop guidelines to PSREs and sponsors to help public sector purchasers of research and research providers to implement the following recommendation relating to IPR: "There is an overwhelming case for requiring that IP generated by a PSRE be owned by the PSRE and assigned by authority of the chief executive – unless effective alternative arrangements already exist...". The ensuing guidance 'Intellectual Property in Government Research Contracts' is aimed at all public sector research purchasers (including government departments, agencies, NDPBs, NHS trusts) who fund any form of research under contracts or similar arrangements, and at PSREs purchasing or performing publicly funded research.

*Investing in Innovation*, published with the Comprehensive Spending Review 2002, indicated that publicly funded research should be published or if there is IPR it should remain with the university.

### **6.2.2 Accession countries**

At present, no particular references may be found within the IP legal frameworks on licensing public IP on an exclusive versus non-exclusive basis in Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland or the Slovak Republic. In Romania, Patent Law no.64/2003 contains the rules for licensing public IP, contains explicit indications on how to register and publish a patent, and on what basis a public IP can be obtained. It also contains rules about the transfer of rights, about rights and obligations, and about defence of rights and inventions. However, no explicit reference to exclusive/non-exclusive basis can be found.

While no general guidelines exist at the present time in Slovenia, individual institutions, where patenting occurs on a more regular basis, have internal guidelines as to the beneficiaries of patent rights. The absence of this topic in past public debate can be attributed to low awareness of its impact on innovation. With debate focusing on changes in the financing and evaluation of research, issues surrounding patenting (especially at public research institutes and universities) are expected to attract more attention in the country.