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*Science and Technology Options
Assessment*

S T O A

**Towards an Intellectual Property Rights
Strategy for Innovation in Europe**

STUDY

(IP/A/STOA/FWC-2008-096/LOT8/C1/SC1)



DIRECTORATE GENERAL FOR INTERNAL POLICIES
POLICY DEPARTMENT A: ECONOMIC AND SCIENTIFIC POLICIES
SCIENCE AND TECHNOLOGY OPTIONS ASSESSMENT

Towards an Intellectual Property Rights Strategy for Innovation in Europe

REPORT

ABSTRACT

On October 13, 2009 the Science and Technology Options Assessment Panel (STOA) together with Knowledge4Innovation/The Lisbon Forum, supported by Technopolis Consulting Group and TNO, organised a half-day workshop entitled '*Towards an Intellectual Property Rights Strategy for Innovation in Europe*'. This workshop was part of the 1st European Innovation Summit at the European Parliament which took place on 13 October and 14 October 2009. It addressed the topics of the evolution and current issues concerning the European Patent System as well as International Protection and Enforcement of IPR (with special consideration of issues pertaining to IP enforcement in the Digital Environment). Conclusions drawn point to the benefits of a comprehensive European IPR strategy, covering a broad range of IP instruments and topics.

IP/A/STOA/FWC/2008-096/LOT8/C1/SC1

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List of abbreviations used

ACTA	Anti-Counterfeiting Trade Agreement
DG	Directorate General
EGDF	European Game Developers Federation
EPC	European Patent Convention
EPLA	European Patent Litigation Agreement
EPO	European Patent Organisation
EPS	European Patent System
ERA	European Research Area
ETSI	European Telecommunications Standards Institute
EU	European Union
FTA	Free Trade Agreement
GAO	Government Accountability Office
IPEC	Intellectual Property Enforcement Coordinator
IPR	Intellectual Property Rights
MEP	Member of Parliament
NPO	National Patent Office
OECD	Organisation for Economic Co-operation and Development
RTA	Regional Trade Agreement
SMEs	Small and medium-sized enterprises
STOA	Science and Technology Options Assessment Panel
TRIPS	Trade Related Aspects of Intellectual Property Rights
WCO	World Customs Organisation
WHO	World Health Organisation
WIPO	World Intellectual Property Organisation
WTO	World Trade Organisation

Executive Summary and Conclusions

Overview

- 1) On October 13, 2009 the Science and Technology Options Assessment Panel (STOA) together with Knowledge4Innovation/The Lisbon Forum, and supported by Technopolis Consulting Group and TNO, organised a half-day workshop entitled '*Towards an Intellectual Property Rights Strategy for Innovation in Europe*'. This workshop was part of the 1st European Innovation Summit at the European Parliament which took place on 13 October and 14 October 2009. The underlying study and the workshop are also to be seen against the backdrop of previous work undertaken by the Science and Technology Options Assessment Panel (STOA Panel) of the European Parliament. The STOA panel published the final report of its project on 'Policy Options for the Improvement of the European Patent System' in 2007. As a followup to this, the STOA Panel launched the project 'Current Policy Issues in the Governance of the European Patent System' in 2009.
- 2) The rationale for organising such a workshop can be seen in the growing significance of the system of Intellectual Property Rights (IPR) for creating welfare in the Member States of the EU – as evidenced in the growing number of IP applications and the increasing share of intangibles, such as IP accounting for company value –, and the perceived need to have issues surrounding the IPR system addressed at the EU level in a coherent manner. The system of IPR to be considered here extends well beyond its most widely known representative, the patent. The four main and distinct instruments under discussion comprise, besides the aforementioned patent (which protects novel technical inventions and necessitates registration and an examination concerning patentability), trademarks (which protect badges of origin for goods or services, e.g. the Coca-Cola logo, and also necessitate registration), designs (which protect the physical appearance of goods) and copyrights (which safeguard concrete expressions of ideas). Apart from these formal means of protecting/appropriating IP, informal means like trade secrets are also to be considered. Products such as the iPhone by Apple show that by combining different IPR instruments (in this case patents, trademarks, designs and copyrights) new business models can be developed. Applied in the right combination, IPR can be key to business success and to value creation from innovation.
- 3) Despite its increased usage, and arguably also its success, the system of IPR is faced with a considerable range of challenges that need to be tackled in order to secure and improve innovation and welfare-fostering functions. These include, to name just a few, the discussion on the need for a Community Patent, the discussion on backlogs of patents and the quality of granted patents, the discussion surrounding the rationale for software patents, the costs of using IPR (frequently perceived to be too high), the under-usage of the system by important actor groups (SMEs, universities) of the innovation system, enforceability issues or the effectiveness of technology transfer schemes using IPR. While the workshop addressed the topic of IPR rather broadly, it nonetheless focussed on two themes: On the one hand, the evolution of the European Patent System, together with the newest developments regarding the introduction of a unified Community Patent and, on the other hand, the protection and enforcement of IPR in an international context.

With the latter topic, special consideration was also given to the role of IPR in the digital economy (basically relating to copyrights and piracy issues). As a result, the workshop was divided into three panels: European Patent System, International Protection and Enforcement, and IPR in the Digital Economy.

The European Patent System

- 4) One of the main problems regarding the European patent system is the fact that – in contrast to trademarks and designs – there is no such thing as a Unified European (Community) patent. The term European patent refers to patents granted under the European Patent Convention. However, after granted, a European patent is not a unitary right, but a group of essentially independent, nationally enforceable and revocable patents. Such patents can be declared invalid by any national court. National judgements are valid only on territory of the State in which the court sits. Hence, a situation ensues – if viewed in an international context – where contradictory judgements create legal uncertainty, forum shopping and high costs due to multiple litigations, if an international/cross-country perspective is being taken. Further issues arise with respect to the filing of European patents, e.g. the translation of the patents into the individual national languages for the protection of European countries.
- 5) First efforts to implement a Europe-wide Community patent date back to 1975, and several attempts have been launched with the same goal since then. However, different interests and stances among various stakeholder groups have slowed the progress towards implementation. In 2007, the Commission released the Communication 2007/165 on enhancing the patent system in Europe and hereby re-igniting the discussion yet again. Following the discussion, the generally accepted features of the Community patent comprise unitary title, respect of Community legal order, co-existence with European and national patents, affordability (SME-friendly) and cost efficiency, legal certainty, high quality, non-discrimination, pre-grant phase regulated by the European Patent Convention (EPC), post-grant phase regulated by the Community Regulation. The two main outstanding issues refer to translation arrangements and the distribution of revenue from renewal fees. Regarding the first issue, a wider usage of automated translation systems has been the subject of debate. Regarding the latter issue, the Slovenian Presidency suggested identifying appropriate criteria to be used in order to establish a distribution key taking the national patent offices into account.
- 6) There has been much progress on the installation of a European Patent Court, particularly since 2007. The key principles of the Unified Patent Litigation system include: (i) proximity to the parties by means of decentralised first instance chambers for infringement cases, (ii) uniform interpretation of the law by means of a pool of judges from a central division, single Court of Appeal, uniform rules of procedure, training of patent judges, and (iii) access to justice by means of funding possibilities from the European Community to establish courts, and legal aid available for parties. The Draft Agreement and the Statute for the New Unified Patent Litigation System is to be created via a 'Mixed Agreement' accessible to third countries in the European Patent Convention (Várhelyi, 2009).

- 7) Outstanding questions in the policy debate relate to whether there is still a Council position on the Community patent system, whether there is an opportunity to discuss it at the European Council level, whether a Community patent can exist without a European/Community patent court (or vice versa) and whether there is a way forward for enhanced cooperation. The latter issue was specifically discussed by the workshop participants. It was reported that further progress has been made with respect to renewal fees and the role of National Patent Offices. This progress is reflected in the concept of 'enhanced partnerships' between the EPO and the NPOs. Such partnerships are based on agreed European standards for searches. Members of NPOs underlined the point that NPOs are capable of doing high-quality work, and the EPO representative indicated that cooperation with NPOs was also sought to reduce the backlog of patent filings.

International Protection and Enforcement of IPR (with special consideration of issues pertaining to IP enforcement in the Digital Environment)

- 8) IP infringement, and especially counterfeiting (i.e., infringement of trademarks) and piracy (i.e., infringement of copyrights) is seen by a wealth of study authors as a growing problem, not only for a large number of industries operating inside the EU, but also in third countries. IP infringements are said to cause considerable economic damages for the affected companies; job losses and risks for the public regarding health and safety. The scope of counterfeiting and piracy activities is reported to have been broadening over time. Counterfeiting is no longer limited to luxury goods or music/video, but covers a wide range of products and services such as car parts and toys. Along the same line, counterfeiters have become increasingly professional (which makes it harder than before to distinguish fakes from originals) and utilise modern distribution channels extensively. Finally, it is worth mentioning that there is some anecdotal and case study evidence that links counterfeiting and piracy to organised crime and terrorism at least in selected cases.
- 9) Despite the general qualitative observation that counterfeiting and piracy poses a big problem for the EU, the situation regarding the availability of quantitative data that measures the extent of the problem can be only described as unsatisfactory. In fact, the latest OECD reports state that the extent of counterfeiting and piracy may be 'unknown and unknowable' (OECD, 2008). This position is foremost rooted in the illegality of counterfeiting and piracy activities which forces economists to make a larger number of (often deliberate) assumptions for their estimation models. The situation is further aggravated by the availability of a larger number of studies which do not – or only in an inadequate manner – disclose the methods and assumptions used for calculating figures. The heterogeneous market structures for counterfeits and pirated goods also have to be taken into account in the discussion on how to tackle and solve the problem. The OECD distinguishes between 'digital piracy' markets and the markets for counterfeit/pirated 'tangibles' which show very different characteristics. One of the most important distinctions in the digital markets is perhaps the appearance of consumers as large-scale distributors of pirated goods in peer-to-peer networks, but with no commercial interests. Another dimension to distinguish is that of primary markets (where consumers are unaware that they buy/consume a fake good) and secondary markets (where consumers can be suspected to know the fake nature of the bought/consumed good). Overall, a very differentiated view has to be taken when examining the scope and issues surrounding counterfeiting and piracy and how to battle that phenomenon.

- 10) With the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) in 1994, minimum standards for different forms of intellectual property (IP) regulation were set in an international context at the level of the World Trade Organisation (WTO). The forums which the EU can draw on to discuss higher enforcement standards to third countries can be classified according to the number of negotiating partners involved. Several papers noted difficulties in progressing to higher IP enforcement standards in institutions at the multilateral level in the past years (with strong opposing forces from selected third countries) and on subsequent efforts by the EU and the U.S. to focus more of their efforts on the bilateral level (e.g., make IP and IPR enforcement standards a topic in Free Trade Agreements (FTAs) or Regional Trade Agreements (RTAs) with individual nations). A relatively new development is the start of negotiations at the plurilateral level (involving a number of like-minded countries) to create a new Anti-Counterfeiting Trade Agreement (ACTA) among 'like-minded' countries. The respective talks have not yet been concluded.
- 11) At the EU level, a number of initiatives were undertaken to fight counterfeiting and piracy, among which are Directive 2004/48/EC of the European Parliament and the Council of 29 April 2004 on the enforcement of intellectual property rights and the EU Strategy for the Enforcement of Intellectual Property Rights in Third Countries (by DG TRADE). The 'EU Strategy for the Enforcement of Intellectual Property Rights in Third Countries' can be seen in this context as the general policy approach by the EU in the trade area, detailing what the EU wants to achieve vis-à-vis third countries in terms of IP enforcement and by what means. The most recent initiatives of the European Union in the fight against counterfeiting and piracy comprise the Communication from the Commission to the European Parliament, the Council and the European Committee – An Industrial Property Rights Strategy in Europe (COM(2008)465 final), the Green Paper on Copyright in the Knowledge Economy (COM(2008)466 final) and Council Resolution 2008/c/253/1 (the European Anti-Counterfeiting and Anti-Piracy Plan of 25th September 2008), all of which underline the commitment to fighting counterfeiting and piracy.
- 12) The discussion in the workshop focussing on counterfeiting and piracy looked, amongst other things, at the role of IP support services enacted, and the need to have copyright law in Europe more harmonised (or even a 'single market' created for copyrights). As far as services are concerned, success factors discussed were the drop of territoriality requirements (i.e., companies should not be required to commercialise technologies within their home countries before they transfer them abroad in order to get support), and services to bridge the gap between innovation-supporting institutions and IPR-supporting institutions (frequently in Europe IPR and innovation support, though logically tied together, are provided by distinct and non-collaborating organisations, giving rise to an instance of 'system failure'). An issue brought up explicitly in the context of copyrights was the need to reform the copyright legislation to facilitate the digitalisation projects of books. Against this backdrop, it was deemed necessary to resolve the issue of orphan works (copyright-protected material, where the copyright owner cannot be (easily or at all) contacted).

Conclusions

- 1) **The need for a comprehensive strategy:** Despite the focus on the patent system, counterfeiting and piracy, the discussion at the workshop touched upon many other issues, illustrating the broadness of the topic. Cases in point are trade secrets (presented as one of the most important IP protection instruments; yet, there is no Europe-wide harmonised legislation for this instrument), the interrelation between IPR and standardisation; and the increasing interrelation of finance and IP; the question of insurance schemes SMEs could make use in IP infringement/litigation cases (which were discussed to not work). It also highlighted the various actors involved with IP matters, both in the private and governmental sectors. Eventually, it also illustrated the strong interaction potential of different IP instruments. Taken together, these findings illustrate two things: First, that the IPR system is – despite planned changes – here and it is here to stay (as stated also in an earlier STOA report). Even members of the Pirate Party acknowledged the need for copyright regulations, albeit with a much less stringent protection scope than today. Secondly, there is a need for a comprehensive strategy that allows for a coherent approach towards this topic.
- 2) **Scope of the strategy:** The next conclusion drawn refers to the scope of such a strategy. It becomes clear that such a strategy should cover a broad range of IP instruments and not be isolated to only one instrument such as the patent. Workshop participants explicitly called, for example, for giving the informal instrument of trade secrets due consideration, and for enforcement topics to be duly covered. Many speakers also agreed that territoriality clauses in service provisions (e.g., demanding that technology transfer take place within the service-offering/funding country) are to be avoided and that more cooperation is needed in various areas at the international level (be it vis-a-vis third countries, or at EU level). It has to be stressed that in the past years considerable advances have been made towards a European IPR strategy; in parts – e.g., in the area of trade – such strategies have already been formulated and enacted.
- 3) **Patent system:** Within the IP strategy the patent system deserves a special role. Institutions are expected to provide security of property. In this respect, the European Patent System (EPS) should define and ensure property rights that give patent holders a secure claim to the fruits of their inventions. In other words, the EPS should include a clear definition and enforcement of the rights and obligations of the institutions. With the forthcoming Lisbon Treaty, the roles and functions are expanded to make some actors more proactive in the co-decision procedure. Multipolarity of actors makes the system more complex. Several avenues can be pursued to attain the Community patent and unitary court, but the real issue is the pace of these reforms.
- 4) **Work division:** It is evident that many institutional players are active in the IPR field. On the Commission side, five DGs play an important role in IPR service provision and/or in preparing/drafting legislation (DG Internal Market and Services, DG Trade, DG Enterprise and Industry, DG Taxation and Customs Union and DG Health and Consumer Protection). The issue of coordination will become more important in the future and it could prove beneficial to look into possibilities of installing a formal coordination structure (like the Intellectual Property Enforcement Coordinator (IPEC) in the U.S.; however, the success of such structures is not yet proven).

The European Parliament should continue providing discussion forums like the workshop for elaborating IPR issues. This function was very much welcomed by all workshop participants. Following the full implementation of the Lisbon treaty, the role of the parliament in terms of co-legislative power also enhances the possibilities for shaping IP legislation. In this light, forums like the ones provided by STOA are valuable tools not only for bringing the relevant players from government and industry together, but also to provide first-hand intelligence to the Parliament. Eventually the issue of integrating IP services in the general innovation support world needs to be considered. Study evidence and expert opinions voiced at the workshop underline that there may still be two non-communicating worlds – that of IP service provision (patent offices), and that of general innovation business support (the world of technology/development agencies) which offer innovation and IP support separately. As IP should be considered part of innovation policy, this points to systems failure, resulting from historic roots/trajectories.

- 5) General characteristics of an IPR strategy:** Besides IPR-specific content, an effective IPR strategy should also fulfil a set of generic criteria, such as solid goal systems or measurable results. While there is no single way to structure policy strategy, the guiding principles of the U.S. Government Accountability Office (GAO) concerning an effective (national) strategy could prove as a good starting point: 1) clear purpose, scope and methodology, 2) detailed discussion of problems and assessment of risks, 3) desired goals connected with objectives, activities and performance goals, 4) description of resources, investments and risk management, 5) definition of organisational roles, responsibilities and coordination and 6) description of the strategy's integration with other institutional stakeholders.

1. Introduction

This report addresses 'A coherent intellectual property rights (IPRs) discussion and development within the European Parliament in support of a future IPRs strategy for Europe.' It is based on a study that comprised the organisation and execution of a workshop, the development of a concise background report which was distributed as support material to workshop participants (category 'other study'), as well as a final report. This report represents the said *Final Report* for the endeavour.

The workshop took place at the *1st European Innovation Summit* at the European Parliament in Brussels on 13 October 2009 and was therefore part of the larger summit over 13 and 14 October 2009. The theme of the summit was 'Strengthening Europe's Innovation Performance'. It was set against the backdrop that the citizens of the EU enjoy one of the highest standards of living in the world. Today, this situation is being severely threatened by major challenges the European Union is facing, including changes in climate, demographics, rising energy and food prices as well as increasing competition, particularly from Asia. Maintaining existing living standards with an emphasis on sustainability is said by many to require Europe to become a leading edge, knowledge-based economy where innovation, driven by talent and creativity, should lie at the forefront of continued success. Europe does not lack know-how, but to ensure their solution, many problems of the 21st Century increasingly require concerted efforts by the public, private and academic sectors. To guarantee that Europe takes advantage of – and leads – the globally based knowledge and innovation economy, it must reconsider its strategic agenda, and formulate relevant policies and projects both at the European and Member State levels.

The topic of Intellectual Property Rights (IPR) is one of the subjects that has been identified in this context to be of high importance. The study is set against the background that effective protection and right utilisation of IPRs are seen by many as fundamental to maintaining Europe's future global competitiveness. However, a number of challenges are present to make the IPR system highly effective in the pan-European context as well. For example, many attempts have been made in the past to define a European Patent System, i.e. a Community Patent, Patent Litigation Court, software patents, patent infringement procedures as well as attempts to address the areas of piracy and counterfeiting. Moreover, there are other issues such as copyright levies that have been debated for many years, and as of yet no 'fair' solutions have been found. In times of open innovation and increasing co-operation in the spheres of international science and technology, knowledge can be created and exploited without borders. Taking all this into account, Europe needs to consider - while at the same time defining its own strategy - the IPR systems in other regions of the world.

The aim of the study in general – and of the workshop in particular – is twofold. Firstly, suggestions for a roadmap (content and scope) towards an IPR strategy are to be developed by the cross-disciplinary working group assembled at the workshop, with a special focus on a unified European Patent System (European Patent Court and Community Patent). Secondly, the international dimension is to be examined. Focal points to be tackled in the latter context are mainly enforcement issues, but also cooperation between offices, patents and customs and the handling of IPR issues in 3rd countries, particularly keeping the needs of small and medium-sized companies in mind. Special consideration shall also be given to the role of IPR in the digital economy.

The latter point has a particularly strong focus on IP enforcement aspects and also deals with IPR instruments other than patents, most notably copyrights. Recommendations on how to use and exploit existing knowledge better – as well as the identification of elements that a unified IPR strategy for fostering innovation in Europe should cover – can be considered the primary goal of the workshop.

The underlying study and the workshop are also to be placed against the backdrop of previous work undertaken by the Science and Technology Options Assessment Panel (STOA Panel) of the European Parliament. The STOA panel published the final report of its project on 'Policy Options for the Improvement of the European Patent System' in 2007. As a follow up to this, the STOA Panel launched the project 'Current Policy Issues in the Governance of the European Patent System' in 2009. In light of the results of the previous project, the STOA Panel has organised a conference with the aim of reviewing issues related to the current status of governance of the European Patent System.

The European Parliament acts as a co-legislator in the field of IPR, e.g. the directive on the legal protection of biotechnological inventions or discussions relating to the directive on the patentability of computer-implemented inventions. Once the Lisbon Treaty becomes effective, the European Parliament will be *de jure* co-legislator for all legislative initiatives in the field of IPR. In addition, issues related to IPR will be of interest to several different committees at the European Parliament. Therefore, a common forum within the European Parliament could be set up in order to ensure coherent IPR policy design, as stated in the policy options for the improvement of the European Patent System.

One important undertaking is to work towards building a discussion platform, and a resource for further policy actions, linking Members of the European Parliament from different committees with stakeholders in order to improve decision-making on patent-related issues. It might be difficult for the current body of parliamentarians to make any commitments. For this reason, the Lisbon Forum is regarded as a plausible solution to bridge the gap between the committees.

On 17 March 2009, the Lisbon Forum, in co-operation with the STOA Panel, organised a dinner discussion on 'Intellectual Property Rights: Sustaining Europe's Knowledge and Innovation Economy' hosted by MEP Rübzig. Many participants supported the proposal that focused on a definitive attempt for a 'Community Patent' and the need to establish a 'European Patent Litigation Court'.

Other aspects raised and debated by the participants included:

- Further need for an effective quality policy in respect of patents as well as a strict application of patentability criteria;
- A more beneficial exploitation of available information from patents and other knowledge data bases;
- Difficulty of determining a fair (proportionate) share of total royalties, based on the contribution of innovation made, especially for complex telecom standards;
- Technology transfer policies that support Europe's international competitiveness and provide value to society at large;
- Need for data exclusivity provisions for scientific work around new indications of known substances used in medicinal products, as well as studies in relation to the re-categorising of medicines from prescription to non-prescription status;

- Broaden the scope of patentability, especially for new areas of innovation outside the traditional sector of manufacturing; and
- The urgent need to develop an IPR strategy for Europe in view of the current crisis.

The Lisbon Forum has been designed specifically for policy makers and the business and science communities to introduce their respective agendas effectively and address the most pressing issues concerning the knowledge and innovation economy. Representatives of different EU Commission Directorates General responsible for areas pertinent to innovation, such as enterprise, research, education, health, food, energy, regional development and information and communication technologies (ICT) were invited to present their initiatives and viewpoints, coupled with priorities offered by the respective European Council Presidencies.

The STOA Panel has set the goal of further enlarging the area of investigation in light of recent policy developments at the European level. In particular, the proposed study covers the Community patent and unitary court, IP enforcement issues in the international context and the role of IPR in the digital economy. Despite the broadness of the topics addressed, it should be nonetheless underlined that only a small fraction of issues currently discussed in the field of IPR can be tackled in this workshop.

This document is structured as follows: Following an outline of the methodology employed (section 3), the study examines in two distinct chapters (chapters 4 and 5) the developments towards a unified European patent system (with a Community patent), and the 'International Protection and Enforcement of IPR, with Consideration of Issues Pertaining to IP enforcement in the Digital Environment'. Both of these two chapters will be sub-divided into two sections, one providing some background information, and one presenting main points of view of the discussants at the workshop (as provided in their abstracts).

2. Methodology

Taking into account the previous policy recommendations, a review of previous academic and policy-making documents was conducted to provide background information and the framework for the workshop. For academic publications, Elsevier's Scopus and Google Scholar were used to retrieve state-of-the-art literature. For policy-making documents, Eur-lex was employed. The database provides online access to the official EU journal, treaties, legislation in force, preparatory acts, case law, and documents of the European Parliament, Council and Commission. Relevant references dealing with the topics of the workshop and study were researched, and then a coherent view of the current state of the art generated. The following questions were answered:

- What is the issue at stake here? Why is it relevant? Why is this being discussed in the first place?
- What is already known? What is the knowledge base we are building upon? What has already been established? What is the current state of the art regarding the issue?
- What is new? What are the recent developments? What is currently being debated? What have we learned from the references? What are the points of contention and their implications?
- Policy implications: what are the future avenues of research or debate? What are the 'blind spots' that still need to be tackled? Where is the topic or issue headed? Is there a need either for policy options or fields that require policy actions? Are the major issues studied in the project falling out of the mainstream legislative process?

It is worth mentioning that the results of this study are not expected to support, defend or contest any of these issues, but rather to analyse them, and to indicate to what extent they may cause a need for policy intervention. Indeed, different opinions exist about the level of need of the issues in question. In this respect, especially the background sections of this study aim to provide a balanced view on how and why these problems are important (the workshop proceedings parts account, of course, for the individual views of the discussants).

3. The European Patent System

3.1 Background information

Introduction

The Convention on the Grant of European Patents of 5 October 1973, European Patent Convention (EPC), is a multilateral treaty instituting the European Patent Organisation (EPO) and providing an autonomous legal system, according to which European patents are granted. The term European patent is used to refer to patents granted under the European Patent Convention. However, after grant, a European patent is not a unitary right, but a group of essentially independent nationally-enforceable, nationally-revocable patents, subject to central revocation or narrowing as a group pursuant to two types of unified, post-grant procedures. It is a time-limited opposition procedure, which can be initiated by any person except the patent proprietor, and limitation and revocation procedures, and which can only be initiated by the patent proprietor. The EPC provides a legal framework for the granting of European patents, via a single, harmonised procedure before the EPO. A single patent application in one language may be filed at the EPO in Munich, The Hague, Berlin or at a national patent office of a contracting state, if allowed by national law. There is currently no single, centrally enforceable, European Union-wide patent. Since the 1970s, there has been an almost continuous discussion regarding the creation of a Community patent in the EU.

Problem

European patents can be declared invalid by any national court. National judgments are valid only on territory of the State in which the court sits. Thus, contradictory judgments create legal uncertainty, forum shopping and high costs due to multiple litigation (Karamountzos, 2009). One example of legal uncertainty is illustrated in Document Security Systems v. European Central Bank. Document Security Systems started infringement proceedings at the Court of First Instance against the European Central Bank for the security features for watermarking Euro banknotes (T-295/05) but the action was dismissed. The European Central Bank filed cases for invalidity of patents in national courts. As a result, the patent was upheld in Germany and the Netherlands, revoked in the United Kingdom and France, and is still pending an outcome in Austria, Belgium, Spain, Italy, and Luxembourg (Varhelyi, 2009).

Nowadays, there exists a fragmented European Patent System because no single title gives protection against high costs and legal insecurity. Moreover, no specialised EU-wide jurisdiction means expensive, unpredictable multi-forum litigation. As a consequence, problems arise for the functioning of the/a single market for patents, enforcement of patent rights, and for innovation and competitiveness. Thus, the competitiveness of European industry is impeded. In fact, innovative start-up companies and SMEs are the hardest hit by the complex and expensive European Patent System. In this respect, the European Parliament of Enterprises, or Eurochambres, debated and voted 'that the absence of a Community patent harms European business' on 14 October 2008. Conclusively, the enforcement of patent rights becomes more difficult (Varhelyi, 2009).

According to the editors of *Managing IP*, the Community patent, promised for some time but constantly stricken with delays, is the 'victim' of vested interests. The economic interests of firms are said to be hostage to the vested interests of national patent offices and patent attorneys. Among those that would suffer from the reduction in revenue are the many patent attorneys that are used to translate documents. Many national patent authorities are also displeased at various aspects of the Community patent. The national patent offices are worried that the creation of a Community patent will undermine their role and culminate in the eventual phasing out of national patents. This would diminish the prominence of national patent offices and lead to a substantial decrease in their income (Editors of *Managing IP*, 2001).

Among the subjects discussed on the EU-wide jurisdiction were the composition of the panels and a pool of judges to hear patent disputes, the scope of exclusive jurisdiction, the possibility for a licence holder to initiate infringement proceedings, the treatment of pending direct actions for revocation and declaration of non-infringement if infringement procedures are initiated before local and regional divisions, and representation of the parties.

It was felt that after informal consultations the panel should consist of two local judges who would ultimately write the judgement, plus one judge from another country who would be able to speak the language of the local court to a very high level. In cases involving particularly technical issues, the judges can request an additional technical judge to join them; this person would be chosen from a central pool of patent judges. On the question of who should be given rights of audience, further informal consultation agreed that patent attorneys who have obtained an additional legal qualification should be allowed to represent clients in disputes brought before the courts under any new patent litigation system.

Negotiations over the European Patent Litigation Agreement (EPLA) were subsequently blocked by a number of countries, led by France, who support an EU-led solution to patent litigation. Since then, negotiators have been trying to find common ground between supporters of the EPLA and those that want to see patent litigation managed within the EU's existing legal framework. However, the EPLA still needs to be reached in a number of key areas, including the length of time any transitional provisions would last (Editors of *Managing IP*, 2008).

What is already known

Initial discussions in the 1960s led to European Patent Convention of 1973. EEC Member States signed the Convention on the Community Patent (CPC) in 1975, which was never ratified. An amended CPC in 1989 failed again. In 2000, the European Commission made a proposal on the Community Patent Regulation to deal with community patent, common judicial system and translation. Firstly, the Community patent was to be granted by the EPO in the same way as current European patents. Secondly, the common judicial system was only for Community patents, not for European patents. Thirdly, translation was needed only for patent claims into two other EPO languages, and not into all Member States' languages.

In 2002, the European Parliament approved the Commission proposal as amended; called on the Council of the European Union (the Council) and the European Commission (the Commission) to revise the European Patent Convention; the Commission to alter its proposal accordingly, and the Council to notify the Parliament in the event of any departures from the text approved by Parliament.

The European Parliament also called for the conciliation procedure to be initiated if the Council intended to depart from the text approved by Parliament, asked to be consulted again if the Council intended to amend the Commission proposal substantially, and instructed its President to forward its position to the Council and Commission.

In 2003, a common political approach emerged to tackle the centralised jurisdiction and the language problem. The Unitary Court for Community Patent was expected to have exclusive jurisdiction in actions for infringements and validity of patent. It was envisaged that the Judicial Panels would be attached to the Court of First Instance to hear appeals. Patent claims were deemed to be translated into all EU languages. These developments were rejected by users and the negotiations stalled.

In 2004, the Council acknowledged the agreement on the Directive on strengthening the enforcement of IPRs. The Council called for a period of reflection.

In 2007, the Commission released the Communication 2007/165 on enhancing the patent system in Europe. To re-launch the discussions, new ideas and processes emerged. Regarding the new ideas, it was suggested that an integrated jurisdiction should include both European patents and Community patents, a delocalised first instance court with central and regional divisions, legal and technical expertise of patent judges, and automated machine translations of patents. Regarding new processes, it was recommended to start with broad principles and add details subsequently, to support a user-based approach with constant and close co-operation with industry and other stakeholders.

Generally accepted features of Community patent comprise unitary title, respect of Community legal order, co-existence with European and national patents, affordability (SME-friendly) and cost efficiency, legal certainty, high quality, non-discrimination, pre-grant phase regulated by the EPC, post-grant phase regulated by the Community Patent Regulation (Karamountzos, 2009).

With respect to patent translations, the London Agreement (in force since 2008) is optional and has been adopted in fourteen States, nine of which are EU Member States. Any EPO-language State dispenses with full translation but continues to have claims translated into its language: France, Germany, Liechtenstein, Luxembourg, Monaco, Switzerland, and the United Kingdom. Any non-EPO-language State dispenses with full translation if the language of the European patent is the EPO language prescribed by that State or has been translated into that State's language (option to ask for translation of claims): Croatia, Denmark, Iceland, Latvia, Netherlands, Sweden, and Slovenia. Full translation is required in case of dispute (Karamountzos, 2009).

The state of play of the Community patent includes language arrangements to reduce costs and complexity for applicants. Firstly, central automated translation into all EU languages, at no extra cost for the applicant, for information that is made available which has no legal effect. Secondly, for filing in the applicant's own language, funding is offered by a central system for translation to EPO language. Thirdly, a full translation of the patent in legal disputes is carried out. Other outstanding issues are the maintenance fee levels and distribution, and working partnerships between national patent offices (Varhelyi, 2009).

The EPLA confers a uniform jurisdiction for European patents, but not for Community patents. The EPLA proposes a European Patent Court with flexibility for Regional Divisions in order to allow for a local presence. The court is expected to include specialised technical and legal judges for high level decisions.

Lower costs and parallel litigation in two national courts for medium-sized cases would be expected to be applied. However, the parallel existence with Community patent jurisdiction could create inconsistencies and duplication of cases (Varhelyi, 2009).

What is new

The key principles of the Unified Patent Litigation system include: (i) proximity to the parties by means of decentralised first instance chambers for infringement cases, (ii) uniform interpretation of the law by means of a pool of judges from a central division, single Court of Appeal, uniform rules of procedure, training of patent judges, and (iii) access to justice by means of funding possibilities from the European Community to establish courts, and legal aid available for parties (Varhelyi, 2009).

The main feature of the Unified Patent Litigation System consists of a first instance with central division and local/regional divisions, second instance, and Registry. All divisions form an integral part of a single judiciary with uniform procedures. The judiciary has a high degree of specialisation in patent litigation and technical expertise with positive input from an advisory committee training framework in order to increase judges' expertise. The Unified Patent Litigation System has jurisdiction in European and future Community patents for infringement and revocation actions. The Unified Patent Litigation System contains an opt-out for European patents, either pending or granted, prior to the new court becoming operational. The Unified Patent Litigation System foresees uniform remedies in infringement actions and appeals made possible for interim decisions. The Unified Patent Litigation System establishes fees to ensure balance between fair access to justice and adequate contributions for services of the court. The European Court of Justice deals with preliminary rulings on interpretation of European Community law (Varhelyi, 2009).

The single patent forum in Europe, with agreement on a proposal for a court that would hear disputes on European patents and Community patents, would potentially include non-EU Member States such as Switzerland. The feedback from judges and practitioners was clear that the patent court should be independent from the European Court of Justice (Nurton, 2009).

However, some Member States had reservations about this approach, and for that reason the European Court of Justice has been asked to decide whether a Europe-wide patent litigation system is compatible with the Treaty establishing the European Community. The unified Patent Litigation Agreement being discussed by Member States is designed to be open to countries that are not EU Member States. Officials have said that the discussion between Member States have so far focused on a draft agreement and a draft statute of the future court, including contentious issues such as the composition of the panels of judges, the implementation and operation of the envisaged agreement, the role of the European Court of Justice in the interpretation of Community law, and transitional agreements (Editors of Managing IP, 2009).

The draft agreement on the EU Patent Judiciary still needs to be worked on including the question of whether infringement and validity should be heard separately (bifurcation). In Germany and Austria, infringement and validity are always addressed in separate hearings, but in most other EU Member States, infringement and validity are heard together. Proponents say this makes for a simpler, more efficient system but Germany maintains that bifurcation is preferable.

Among the issues relating to the European litigation system that remain to be tackled are: bifurcation, the number of regional and national divisions, the nationality of judicial panels, technical expertise, languages, the role of the European Court of Justice, substantive patent law, funding, and transitional provisions. The draft agreement envisages having a central division as well as an undefined number of local and regional divisions. Where the regional courts should be sited would depend on the size of cases as well as their number and volume, since some jurisdictions have many small disputes, while other jurisdictions cover fewer larger cases (Editors of Managing IP, 2008).

Policy implications

While some delegations of Member States would prefer to keep progress on patent litigation separate from that on the Community patent, others are of the opinion that consensus should be reached on both areas simultaneously (Council, 2008).

As regards the Community patent, discussions have focused on the two main outstanding issues, viz. translation arrangements and the distribution of revenue from renewal fees. It is felt that an agreement on these two issues would considerably facilitate an overall agreement on the Community patent Regulation. There was broad agreement that in the interest of the users of the patent system, in particular SMEs, the cost of the Community patent must be affordable (Council, 2008).

With respect to the translation arrangements, it was noted during an initial round of discussions in the Working Party of the Council that a majority of delegations from the Member States would welcome the idea of exploring solutions making use of automated translation systems. Building on those discussions, the Presidency submitted a new working document (8928/08), part I of which contains additional suggestions for the translation arrangements aimed at further facilitating access to the patent system for SMEs and, at the same time, safeguarding the legitimate interests of third parties (Council, 2008).

Regarding the distribution to national patent offices as part of the revenue accruing from renewal fees for Community patents, the Slovenian Presidency suggested identifying appropriate criteria to be used in order to establish a distribution key. To this end, in part II of the above-mentioned working document, the Presidency put forward a number of new suggestions taking into consideration the size of the market, the level of patent activity and improving the access of SMEs to the patent system (Council, 2008).

In regards to the patent litigation system there appears to be broad agreement on the overall structure, but there are also issues which need to be discussed further in more technical detail. These include, in particular, the composition of panels at first instance, the language of proceedings, the jurisdiction for counterclaims for invalidity, transitional arrangements, the modalities for granting the Court of Justice the power to review judgments handed down by the appeal instance, and the funding of the system (Council, 2008).

There has been much progress on the European Patent Court since 2007, which was welcomed by the European Patent Judges Resolution in November 2008 ⁽¹⁾. The Draft Agreement and the Statute for the new Unified Patent Litigation System is to be created via a 'Mixed Agreement' accessible to third countries in the European Patent Convention. A revised draft Regulation on Community Patent has been proposed. There exists support from industry and practitioners for ongoing work (Varhelyi, 2009).

The long-discussed single Community patent could be implemented without all EU Member States being part of it. Spain is believed to be the country that most strongly opposes the proposed Community patent, mainly due to the proposed language regime, which would favour English, French and German (Nurton, 2009).

To sum up, Karamountzos (2009) raised the following questions:

- Is there still a Council position on the Community patent system?
- Is there an opportunity to discuss it at the European Council level?
- Can a Community patent exist without the European or Community patent court and vice versa?
- Is there a way forward for enhanced co-operation?

3.2 Speakers and discussants abstracts

Margot Fröhlinger (Director, Knowledge-based economy, DG Internal Market, European Commission) opened the panel and discussed the latest developments in the field of IPR in the European Commission, underlining the high commitment of the Commission to secure a highly effective IPR system that fosters innovation and that provides adequate responses to counterfeiting/piracy activities.

Intellectual property rights are one of the cornerstones of a competitive, wealth-generating, knowledge-based society. A well-functioning IPR system offers incentives to create and innovate with rewards and at the same time benefiting society through new products and technologies. To optimise the conditions for innovation, the Europe needs a regulatory framework granting high quality rights, a robust, proportionate and fair enforcement system, and effective management of IPR in the digital age. With respect to the Community legislative framework in IPR, there is an urgent need to build on the significant progress in recent discussions on the Community patent with an agreement to create a Community patent for the entire EU territory and a unified patent litigation system also encompassing current European patents. This will allow innovators to realise the full benefits of the Single Market and compete in the global economy with more affordable patent protection through a system that performs a rigorous examination to safeguard quality and ensure a true inventive contribution is made. This is a necessary condition for IPR in an effective innovation strategy. However, Europe also needs effective enforcement mechanisms, where there is scope for more focused actions through partnerships and administrative cooperation. This will provide for a responsive system to strengthen the fight against counterfeiting and piracy.

¹ <http://www.eplaw.org/Downloads/Third%20Resolution%20of%20Judges%20-%202015%20November%202008.pdf>, retrieved November 26, 2009

András Jókúti (Deputy Head of Legal and Intl. Department of the Hungarian Patent Office) elaborated on the division of work between the National Patent Offices (NPOs), the EPO and the role of the NPOs. For him, work sharing is not only desirable, but also inevitable for the patent system in Europe.

An enhanced partnership between the EPO and NPOs is necessary for several reasons, such as need for quality and timeliness in the granting procedure, reducing the costs of patenting and increasing the attractiveness of the European patent system. The project of the Community patent gives a particular actuality to these issues.

Hungary believes that only a network-based approach can prove to be fruitful in the long run. Strengthening the national patent infrastructure equally serves the interests of local industries and the overall competitiveness of the European Union. Concerning the work to be imposed on the EPO by the future Community patent, the Common Political Approach of 2003 is only the starting point in terms of partnership.

In the view of Mr. Jókúti, the two key elements are the following: 1) The role of national patent offices should not be limited to self-financing and survival – they are indeed capable of high quality work. 2) It is not financial subventions that NPOs need but substantial work.

The basis of this process should obviously be the European Patent Network set up within the European Patent Organisation, and the initial experiences gained from its functioning. The UPP, the European Quality System and even the temporarily suspended (but not abandoned) outsourcing ideas are the cornerstones of an effective work sharing arrangement.

Recent developments in the international patent environment fully are said to justify these endeavours. It is enough to think of the Patent Prosecution Highway and the IP5 projects which reflect the same insights on an international scale.

When thinking in terms of enhanced cooperation, the following traps should be avoided: 1) The fallacy of the “applicant’s choice” principle in the partnership projects. It is almost trivial that the freedom to choose the route to get patent protection does not equal to the freedom to choose the methods of searching and examining at the authorities. Hungary only deems the “office-driven” model of partnership viable. 2) An unhealthy reliance on machine translations. The goal should be that national offices make themselves capable of working at least in one of the EPO languages. 3) Over-specialization: no patent office should be in a position where it cannot search or examine applications in all possible technical domains.

Hungary remains committed to contribute to the enhancement of the European patent system, which includes reinforced partnership between the EPO and the national patent offices. This implies the elaboration of a European Standard for Searches and the exploration of ways to give an important role to NPOs in the examination phase as well. A high level of mutual trust between industrial property offices creates an innovation-friendly environment which results in a win-win situation.

Stefan Luginbühl (Legal Advisor, International and Legal Affairs, European Patent Office) discussed mainly the workload problem at the European Patent Office, and how this should be dealt with while maintaining the highest possible quality standards. He also elaborated on issues surrounding the Community Patent.

Workload problem

In order for the patent system to fulfil its function of promoting innovation, it is a pre-condition that high quality patents are granted within a reasonable time. This is only possible if the workload of the patent offices allow them to do so. That is why workload management is key in an environment of increasing workload of the patent offices.

The current conundrum at the European Patent Office (EPO), as in every other major granting authority in the world is: how to reduce duplication of work and improve timeliness, whilst promoting the highest possible quality. The EPO has adopted two basic approaches to attempt to cope with its workload issues. First, internal measures are being implemented designed to increase efficiency and maintain quality standards. Secondly, the EPO is seeking to increase its cooperation with other Offices so as to reduce duplication of effort within Europe, and around the world.

The internal measures mainly aim at increasing the quality of incoming patent applications and streamlining the grant procedure at an early stage. In particular, applicants will be induced to comply, at the search stage already, with the requirements of clarity and conciseness of claims laid down in the European Patent Convention (EPC). For this purpose, several changes have been made to the Implementing Regulations to the EPC.

With regard to the international cooperation several activities have been initiated at both European and global level and a number of work-sharing schemes have been developed and are already being tested in practice. The common denominator of such schemes is to take concrete measures which help to eliminate unnecessary duplication of work between the Office of first filing (OFF) and the Office of second filing (OSF) by utilising each other's work. From the point of view of the EPO, the most important arrangements are the 'Utilisation Scheme' and the 'Patent Prosecution Highway (PPH)', as well as the different initiatives in order to explore avenues to improve the efficiency and effectiveness of the Patent Cooperation Treaty (PCT). Within the Utilisation Scheme framework applicants will be requested to submit to the EPO search and examination reports from the OFF. The EPO is currently developing the regulatory and operational framework necessary to its implementation. The Utilisation Scheme is part of an enhanced partnership between the EPO and the national patent offices of the member states which will be further developed in the future. The PPH is intended to provide an option for applicants to obtain patent protection more efficiently and faster in the country of the OSF through an accelerated examination when the OFF has already established that the claimed subject-matter is patentable. The PPH is currently tested in a pilot between the EPO and the US Patent and Trademark Office, and the EPO intends to launch another such pilot with the Japan Patent Office as of January 2010.

Community Patent/Unified patent litigation system for Europe: A solution is necessary for European patents

The EPO has and will support the efforts to establish a unitary Community patent which is affordable, simple and reliable in order to create a flourishing patent culture in Europe. However, what is really pressing in the European patent system is a solution for the almost 1,000,000 classical European patents that have been granted and are on the market, and the European patents that will be granted.

Therefore, if an agreement on the Community patent and the related 'European and Community Patents Court' is not conceivable any time soon, it must be considered to take a first intermediate step by establishing a uniform litigation system for classical European patents in order to tackle the shortcomings of the current system, such as costly multiple litigation, diverging court decisions regarding the same European patent and lack of uniform interpretation of uniform European patent law, as well as forum shopping . Such an approach will improve the competitiveness of Europe vis-à-vis Asia and the US and will support innovation in Europe.

Alexander Ramsay (Deputy Director, Division for Intellectual Property Law, Ministry of Justice, Sweden) also discussed issues surrounding the Community patent, the division of work between NPOs and the EPO and the draft agreement on the European and Community Patents Court.

Following the instructions of the Competitiveness Council the Swedish Presidency is aiming at a conclusion as a matter of urgency on the Community patent and the European and Community Patents Court. The Presidency is aiming at achieving as much progress as possible and seeks agreement in a number of the remaining outstanding issues.

With regard to the Community patent the efforts of the Councils working party has mainly been focused on the renewal fees and the role of the National Patent Offices of the Member States (NPO) in the reformed European patent system under the Community patent. The result is an emerging consensus in these fields.

The role of the NPOs is taking form around the concept of enhanced partnerships between the European Patent Office (EPO) and the NPOs. This concept was launched during the Czech Presidency and has been further developed during the Swedish Presidency. Enhanced partnerships shall be based on a European standard for searches ensuring that searches and search reports are of such quality that the EPO on a regular basis can make use of searches conducted on a previous national patent application concerning the same invention. The enhanced partnerships should hereby facilitate the optimal use of all available resources ensuring timely delivery of patent rights.

In June 2009 the Council requested the opinion of the European Court of Justice on the compatibility with the EC-treaty of the draft agreement on the European and Community Patents Court. The Member States have now been given the opportunity to file written observations to the ECJ and there will be an oral hearing, hopefully this year. The opinion of the ECJ cannot be expected during the Swedish Presidency and the work is therefore focused on some of the major outstanding technical issues not under the scrutiny of the ECJ. These are the composition of the panels of the first instance, the handling of actions for revocation brought forward in an already pending infringement case, the language of proceedings of the first instance, the transitional arrangements and the financing of the court.

Thomas Tindemans (Head of Public Affairs Group, White & Case) underlined in his contribution the importance of trade secrets as an integral part of an enterprises' IPR strategy.

Trade secrets, or know-how, are an essential part of many European companies' intellectual property portfolios. Trade secrets can encompass a wide range of information and know-how, but generally they are one of the several means available to companies and individuals to protect their innovation and R&D efforts. They often cover some of a company's most valuable assets. The theft of a trade secret can be just as damaging as, if not more than, the infringement of patents, copyrights or trademarks.

When trade secrets are stolen, it results in unfair competition among industry players and stifles innovation in the long run. The products resulting from the theft enter the market, compete unfairly with and undercut the genuine products. Although there are possibilities to challenge the theft itself, there are no EU measures to prevent infringing products from entering the market (e.g. through customs control). The capacity to innovate determines the survival of European companies and the fact that intellectual and know-how portfolios based on trade secrets are not adequately protected is harming European industry.

Certain EU Member States have recognized this problem and have addressed it in their domestic legislation. The importance of trade secrets has also received recognition at an international level, particularly within institutions such as WIPO and the WTO, which have made significant efforts to promote strong protective measures for trade secrets and launched a number of initiatives to educate businesses on this aspect of intellectual property – specifically small and medium size enterprises that rely heavily on innovation. In fact, the protection of trade secrets is enshrined in the WTO's TRIPS agreement. Although there is European legislation in place to protect IP rights and to prevent IP infringing goods from entering the EU market, it does not explicitly cover trade secrets.

The international recognition of the importance of trade secrets and the lack of equivalent Europe-wide legislation have recently been confirmed by the European Commission in its response to a question put to it by Toine Manders MEP (EPP). The inclusion of trade secrets in existing European IP legislation would be a major step to achieving the goal of protecting this business' critical information and would undoubtedly help to enable European companies to combat trade secret theft more effectively. 'Trade secrets' are critical to European innovation, yet they lack formal recognition and protection at EU level. Combined with the growing trend in trade secret theft, this situation is very damaging to European industry.

Box 1 -EXAMPLE OF TRADE SECRET THEFT

The Michelin case

In May 2005, Michelin had one of its prototype tyres (the Michelin Z BTO, nicknamed the 'magic tyre' after it enabled the relevant rally team to win six races in a row between 2004 and 2005) stolen during a rally in Japan. Michelin does not patent its competition tyres in order to protect the manufacturing methods it uses. At the time, Michelin was reported as stating that this was a clear case of industrial espionage.

In the manufacturing industry, there is valuable know-how associated with processes which have often taken years to perfect and fine-tune. The advances may not individually be capable of being patented (or the owner may not wish to disclose such advances), yet they often provide its owner with a significant advantage over his competitors (either through a particular innovative step or through the combination of a series of incremental advances). In the field of materials production for instance, the exact combination of complex processes, together with the iterative refinement of individual processes over the years, enables a particular company to produce an end-product in an efficient manner, at high productivity rates and exhibiting high physical characteristics. As a mature company in the industry, or as a player that has invested significantly in R&D, such results are achievable.

A new entrant, or a company with little R&D capabilities, may be able to produce the same material, but would not necessarily be able to achieve the same productivity rates or physical properties for the material in question. Access to such information and know-how could not only save a new entrant (or a competitor with low R&D capabilities) years of R&D, but more importantly would provide it with immediate access to certain technological advances that it may not have the capability to develop. This would then allow the competitor to market products offering similar characteristics to the owner's at a cheaper price (due to the absence of any significant R&D costs). EU legislation currently does not offer any adequate protection or remedies for these types of theft. The worrying aspect from an EU perspective is that the licensing of such technologies is encouraged by the European institutions for companies based in developing countries. The objective is that the technology and know-how will allow these countries to address important issues such as environmental protection more effectively. But, what actually happens is that technology is being stolen and local resources are being used not to deploy the technology in the domestic market, but rather to export to other markets such as the EU.

4. International Protection and Enforcement of IPR, with Consideration of Issues Pertaining to IP enforcement in the Digital Environment

4.1 Background information

Introduction

The IPR debate also carries a strong international component. Two dimensions have to be considered in this regard: 1) the dimension concerning third countries and 2) the dimension concerning the harmonisation of IP-related legislation and policy practice across EU Member States. Especially the discussion of the former aspect shows a strong focus on enforcement issues in general, and the fight against counterfeiting (i.e., the infringement of trade marks) and piracy (i.e., the infringement of copyrights) in particular. The rationale of this discussion has to be seen in the context of the increasing trade of counterfeit goods, stemming especially from a limited number of third countries. The protection of innovations of European firms in 3rd countries is also an important cornerstone of the debate, in order to ensure that investments in R&D and business opportunities in foreign markets are not foregone. The dimension concerning inter-EU Member States is by comparison less pronounced, but still an important issue. Besides the discussion of a Unified European Patent (see section 3), issues that require attention are that of trans-national technology transfer and respective IPR regulations (frequently, national support programmes require commercialisation of the results within the nation/region that has provided the support), collaboration and work division when providing IPR-related services or the issue whether criminal penalties for IP crimes are to be harmonised across Europe (and if yes, to what extent). The topic of coordination (among EU and EC organisations, but also within Member State authorities/organisations), together with collaboration of the private sector, is a common thread in discussions relating to the international dimension of IPR. This section will focus – among the variety of issues that can be tackled – on IP enforcement issues in an international context.

Problem

IP infringement, and herein counterfeiting and piracy, is seen by a wealth of authors as a growing problem for a large number of industries operating inside the EU but also in third countries (see, for example, OECD, 2008). IP infringements are said to cause considerable economic damages for the affected companies, job losses and risks for the public with regard to health and safety (for the latter, see also WHO, 2006). The scope of counterfeiting and piracy activities is reported to have been broadening over time. Counterfeiting is no longer limited to luxury goods or music/video, but covers a wide range of products and services such as car parts or toys. Along the same line, counterfeiters have become increasingly professional (which makes it harder than before to distinguish fakes from originals) and utilise modern distribution channels extensively. Finally, it is worth mentioning that there is some anecdotal and case study evidence that links counterfeiting and piracy to organised crime and terrorism at least in selected cases (Treverton et al., 2009; OECD, 2008: 87).

Despite the general qualitative observation that counterfeiting and piracy poses a big problem for the EU, the situation regarding the availability of quantitative data that measures the extent of the problem can be only described as unsatisfactory. In fact, the latest OECD reports state that the extent of counterfeiting and piracy may be 'unknown and unknowable' (OECD, 2008). This position is foremost rooted in the illegality of counterfeiting and piracy activities which forces economists to make a larger number of (often deliberate) assumptions for their estimation models. The situation is further aggravated by the availability of a larger number of studies which do not – or only in an inadequate manner – disclose the methods and assumptions used for calculating figures (Blind et al., 2009, Weatherall et al., 2009).

Commonly used estimates for the amount of IP infringement activities are seizure statistics by customs authorities, survey data (of consumers and rights holders) or the number of IP infringement cases filed in court (Blind et al., 2009; CEBR, 2002). All of these data sources have their shortcomings (see Weatherall et al., 2009):

- With seizure statistics, it is, for example, not clear whether customs seizures represent 1 % or 99 % of all infringements or whether certain products or locations are over-represented or not. Changes in the number of seizures might be due to a number of factors: changes in the level of activities of counterfeiters, but also more effective enforcement action or better communication of IP rights holders with the customs authorities. Eventually, seizure statistics specifically capture the infringement of counterfeited goods, i.e. trademark infringements, and also to a rather small extent pirated goods, i.e. copyright infringements, but little of the other IPR infringement types.
- Survey data needs to be cleared of subjectivity biases. The study by Weatherall et al. (2009) states that '...after all, there is no incentive for industry to underestimate the problem'. However, it should also be noted that 1) some firms may wish to not disclose information if they are affected by counterfeiting (e.g., if the company fears a loss in trust by its customers) and/or 2) that those opposing the IPR system may be, especially if ideologically driven, prone to underestimate the problem. If survey data and/or trade statistics are augmented e.g. by utilising value estimations (not only counting the number of IP infringement cases), such subjectivity and further on valuation problems are multiplied.
- As only a fraction of IP infringement cases are actually settled in court (most of the time parties reach agreements/settle out of court), only a small portion of actual IP infringements can be captured with such data.

The heterogeneous market structures for counterfeits and pirated goods also have to be taken into account in the discussion on how to tackle and solve the problem. The OECD distinguishes between 'digital piracy' markets and the markets for counterfeit/pirated 'tangibles' (OECD, 2009). The table below presents the main differences between these two markets, as outlined by Scorpecci (Scorpecci, 2009).

Table 1 Market characteristics for 'tangible markets' and 'digital piracy' markets

'Tangible counterfeit/pirated goods' markets	'Digital piracy' markets
<i>Product-specific traits</i>	
Positive marginal cost of production	Virtually zero marginal cost of production
Need for manufacturing facilities, physical transportation and distribution networks	Digital (and virtually costless) delivery
Targeted markets	Broad (global) and diffuse markets
Products attacked are often mature and cover a wide range from common everyday items to luxury goods	Products attacked at point of creating intrinsic value
<i>Market-specific traits</i>	
Possibility to generate large profits	Involvement of a large number of actors, acting both as suppliers and consumers, often with no interest in profits
Possibility to involve goods that have health/safety implications	Effects are purely IPR-related (no health/safety implications) ^{*)}
Attractive for organised crime (including infiltration of legitimate supply chains)	Not attractive for organised crime
Existence of opportunities to intercept products	Diffuse nature of activities, involving different legal jurisdictions, much more difficult to deal with through available remedies

Source: Scorpecci, 2009

Another dimension to consider is the distinction between primary markets (where consumers are unaware that they buy/consume a fake good) and secondary markets (where consumers can be suspected to know the fake nature of the bought/consumed good) (OECD, 2008).

Despite the methodological issues, and the caution necessary when using these data, it seems nonetheless interesting to note some of the most frequently quoted figures:

- The most recent figures from the OECD (OECD, 2008) put the value of internationally traded counterfeit goods at US\$ 200 Bio in 2005. However, this figure only covers internationally traded counterfeits (i.e., it would not cover counterfeits produced and sold within a specific country), and only the IP infringement/counterfeiting of physically-tangible goods (no piracy activities).
- For the EU, the Centre for Economic and Business Research (CEBR) concluded that EU GDP may be reduced by € 8 Bio per year due to counterfeiting activities, and that job losses amount to 17,000 jobs per year. The study examined four distinctive sectors: Clothes and footwear, cosmetics and perfumes, toys and sporting goods, and pharmaceuticals (CEBR, 2002).
- The Business Software Alliance (BSA) examines regularly the evolution and developments of personal computer piracy. The latest study (BSA, 2009) suggests that the world wide piracy rate measured amounted to 41 % in 2008. The monetary value of unlicensed software ('losses' to software vendors) was calculated to be US\$ 53 Bio. The BSA noted that while emerging economies account for 45 % of the global PC hardware market, they account only for less than 20 % of the respective software market.
- Also noteworthy are customs seizure statistics: According to the latest figures available, the number of seizures at EU borders increased from 25 Mio in 1999 to almost 180 Mio in 2008. Application for action submitted by the private sector to customs peaked at 12,866 applications in 2008. In 2000, only 981 such applications were filed. In terms of origin of counterfeit goods, customs figures report China to be the provenance of 56 % of seized goods, followed by the United Arab Emirates (15.2 %), Taiwan (10.3 %), Indonesia (2.7 %) and Turkey (2.5 %), though differences in the ranking and the shares have to be considered when the figures are broken down by goods categories (TAXUD, 2009).

It must be noted that – not the least due to the methodological issues noted above – many of the quoted figures are being put into question especially by authors who oppose strong IPR regimes and enforcement activities (see, for example, Sell, 2008).

What is already known

With the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) in 1994, minimum standards for different forms of intellectual property (IP) regulation have been set in an international context at the level of the World Trade Organisation (WTO). The agreement also governs aspects of IP enforcement. However, some countries are reported to face difficulties implementing all TRIPS provisions, often reported due to lack of absorptive institutional capacities. Furthermore, many countries may not favour the introduction of higher IP enforcement standards because they fear disadvantages for their local societies and industries (e.g., in terms of access to medicines if strong patent protection is implemented). On the other side, developed economies such as the U.S. or the EU aim for even higher IP enforcement standards (higher than stipulated by TRIPS) in third countries (Pugatch, 2007). Especially the U.S. is often labelled in this context to follow a 'TRIPS Plus' agenda vis-à-vis such nations.

The forums which the EU (and the U.S.) can draw on to discuss higher enforcement standards to third countries can be classified according to the number of negotiating partners involved. At the multilateral level – involving many trading partners – the institutions of the WTO (World Trade Organisation), WIPO (World Intellectual Property Organisation), WHO (World Health Organisation), WCO (World Customs Organisations) and Interpol can be utilised. Several papers noted on difficulties in progressing to higher IP enforcement standards in these institutions in the past years (with strong opposing forces from selected third countries) and on subsequent efforts by the EU and the U.S. to focus their efforts more on the bilateral level (i.e., make IP and IPR enforcement standards a topic in Free Trade Agreements (FTAs) or Regional Trade Agreements (RTAs) with individual nations) (Sell, 2008; Pugatch, 2007; Mercurio, 2006). A relatively new development is the start of negotiations at the plurilateral level (involving a number of like-minded countries) to create a new Anti-Counterfeiting Trade Agreement (ACTA). The respective talks have not yet been concluded.

At the EU level, a number of initiatives have been undertaken to fight counterfeiting and piracy. Matthews (2008) summarises the most important of them up until 2007:

- Combating Counterfeiting and Piracy in the Single Market – Green Paper. COM (98) 569 final, 15 October 1998
- Communication from the Commission to the Council, the European Parliament and the Economic and Social Committee. Follow-up to the Green Paper on combating counterfeiting and piracy in the single market. COM(2000)789 final
- Council Regulation (EC) No. 1383/2003 concerning customs action against goods suspected of infringing certain intellectual property rights and the measures to be taken against goods found to have infringed such rights (in force since July, 1 2004)
- Directive 2004/48/EC of the European Parliament and the Council of 29 April 2004 on the enforcement of intellectual property rights
- The EU Strategy for the Enforcement of Intellectual Property Rights in Third Countries (DG TRADE, 2004)
- Proposal for a Council framework decision to strengthen the criminal law framework to combat intellectual property offences. COM(2005)276 final 12 July 2005
- Council Resolution of 13 March 2006 on a customs response to latest trends in counterfeiting and piracy
- The European Parliament legislative resolution of 25 April 2007 on the draft of the Directive on criminal measures (amended and clarified various provisions of the Directive)

The 'EU Strategy for the Enforcement of Intellectual Property Rights in Third Countries' can be seen in this context as the general policy approach by the EU in this field, detailing what the EU wants to achieve vis-à-vis third countries in terms of IP enforcement and by what means.

The overall goal of the strategy is '...to provide a long-term line of action for the Commission with the goal of achieving a significant reduction of the level of IPR violations in third countries.'

This is to be achieved by 1) describing, prioritising and co-ordinating the mechanisms available to the Commission for achieving its goal 2) by informing right holders and other entities concerned of the means and actions already available and to be implemented 3) by raising their awareness for the importance of their participation and 4) by enhancing cooperation with right holders and other private entities concerned. In the following, 8 action lines have been defined, and 22 separate actions assigned to either one of these lines. Overall, the Commission places a ‘...strong emphasis on cooperation and dialogue’, but also warns ‘...that it cannot afford to tolerate continued, systematic and large scale infringements of IPR’ (Devigne, 2009). The country focus of the strategy has been placed in 2006 on China, Russia, Turkey, the Ukraine, Chile, Korea, the ASEAN and Mercosur nations. Currently, a revision of these priority countries is underway. Activities are set especially with regard to bilateral cooperation (here, the EU-U.S. Action strategy is to be mentioned, or a similar cooperation with Japan), cooperation at the pluri-/multilateral levels, technical assistance projects (e.g., multi-year IPR programmes in China, ASEAN, Central Europe, trainings programmes, etc.) and cooperation with the private sector. The latter is being tackled, amongst others, through regular consultation of industry or through participation of stakeholders in IPR dialogues.

Below the strategic policy level, a number of service activities in the field of IP enforcement (and more general IPR support services) are offered by various DGs of the European Commission. DG MARKT has recently introduced the European Observatory on Counterfeiting and Piracy in order to improve the quality of information and statistics, identify national best strategies and enforcement practices, as well as to help raise awareness. DG TRADE operates the IPR enforcement survey with the aim of monitoring the developments pertaining to IP infringements in third countries, and implements activities with regard to the Enforcement Strategy in third countries. DG TAXUD provides customs-related services and has an active role in fighting counterfeiting and piracy. DG SANCO deals especially with health-related issues (e.g., counterfeit medicines). DG ENTR operates services such as the Enterprise Europe Network (EEN) which provides a one-stop shop for enterprises for information/advice on European matters and also IPR, the China IPR helpdesk for SMEs (which offers free first-line advice and trainings support to SMEs operating in China), and carries out service-related projects such as the Best Practices project on IPR enforcement support measures (finished in 2009 (Aguilera-Borresen et al, 2009)) or the IPEuropAware project (run with the aim, amongst others, to improve SME access to UP enforcement and registration). The Commission services augment the portfolio of IPR-related services offered by Member States, of which more than 200 – frequently operated by NPOs – were counted (Radauer et al., 2007). Noteworthy is especially the fact that actual field work in the area of IP enforcement is the responsibility of each EU Member State.

What is new

The most recent initiatives of the European Union in the fight against counterfeiting and piracy comprise the following:

- The Communication from the Commission to the European Parliament, the Council and the European Committee – An Industrial Property Rights Strategy in Europe (COM(2008)465 final);
- The Green Paper on Copyright in the Knowledge Economy (COM(2008)466final)

- Council Resolution 2008/c/253/1 (the European Anti-Counterfeiting and Anti-Piracy Plan of 25th September 2008)

The Communication on *'An Industrial Property Rights Strategy for Europe'* adds considerable detail to the evolving IPR agenda. In this communication, the importance of strong industrial property rights to protect innovations in Europe is underlined. Besides the call for the creation of a Community Patent, the Communication also includes a series of proposals which address (i) dispute resolution procedures and (ii) enforcement of IPR and the fight against counterfeiting and piracy. Within these two thematic fields, strong emphasis is placed on facilitating and improving collaboration among the relevant stakeholders. The following recommendations and actions are spelled out:

- Member States are encouraged to offer adequate support to SMEs to enforce their IPR, to raise awareness on the topic of intellectual asset management for all businesses and researchers, to help national patent offices and technology/development agencies work better together, to enhance coordination and best practice exchange between key players (such as customs authorities, the police, prosecutors, etc.) and to facilitate cooperation with the customs authorities and exchange data that will enable customs to target suspect shipments successfully.
- The Commission, in return, undertakes 1) to promote further awareness-raising activity, 2) to work to improve cooperation between all players involved in the fight against counterfeiting and piracy within individual Member States, 3) to explore solutions for Europe-wide actions through an effective network for administrative cooperation between Member States 4) to help the public and the private sector work together and 5) to broker an inter-industry agreement to reduce internet piracy and the selling of counterfeit goods. In addition, the Commission targets 6) high risk traffic of counterfeit goods by promoting the use of information-sharing, 7) to cooperate with Member States to improve intelligence networks and study how information collection in the field of counterfeiting and piracy can be more effective, 8) to develop a new customs action plan against counterfeiting and piracy and 9) to further help companies in third countries (in particular by building on the experiences of the IPR Helpdesk in China). Eventually, 10) a joint action plan against counterfeiting and piracy is to be developed together with the Chinese customs authorities.

The Council supported the aforementioned communication and adopted a resolution on a Comprehensive Anti-Counterfeiting and Anti-Piracy Plan on 25th September 2008. The resolution highlighted *'...the need to mobilise all stakeholders to boost the effectiveness of the whole range of instruments for protecting intellectual property and combating counterfeiting and piracy on the internal market and internationally.'*

Policy implications

Despite the many initiatives taken both by EU bodies, and by the Member States, it is clear that successfully tackling the subject of IP enforcement in an international context continues to be a major challenge. In this background paper, only some of these issues could be highlighted. The evidence gathered nevertheless indicates where major activity fields could be found for policymakers:

1. *Data availability*: The availability of data and statistics which measures the extent of IP infringements, counterfeiting and piracy continues to be a prime issue, despite the many studies conducted. Improving the situation in this regard, supporting endeavours for well researched and documented data and the collection of respective intelligence can be seen as vital.
2. *Goal setting and performance measurement*: A number of strategies, communications and activities have been set at the EU level and address the topic of IP infringement, counterfeiting and piracy. This raises the question on the effectiveness of the activities undertaken. In the context of the general problems measuring the extent of counterfeiting and piracy, it also becomes clear that measuring success of individual policy interventions (i.e., assess of what works and what does not) against the goals set is a notable challenge – in the U.S., the lack of performance measures pertaining to IP enforcement activities has been specifically noted (GAO, 2008).
3. *Work distribution and coordination – bridging the gap between the innovation supporting and the IP supporting institutions*: The distribution and coordination of IP enforcement-related activities amongst service-offering institutions both at the EU and the Member State level may be an area of concern for several reasons. On a more general level, it can be observed that there are two distinctive groups of service providers: those offering support mostly for IP matters (e.g., patent offices, patent information centres) and those that offer general innovation-related support and have little offerings in the field of IP. As a result, IP/IP enforcement and innovation support are not delivered institutionally in an integrated manner, but rather through different and frequently non-communicating groups of service providers. Increasing the collaboration among patent offices and general innovation-supporting agencies – as called for in the Communication on An Industrial Property Rights Strategy for Europe – seems to be important in this context.
4. *Work distribution and coordination internationally*: The question of ‘who should offer what’, and how an effective coordination between the different operating authorities is to be guaranteed is another issue in the context of work distribution/coordination that may merit closer attention. Within the EU, work regarding IPR is divided among at least six DGs: DG TRADE (for trade-related aspects), DG MARKT, DG ENTR, DG TAXUD, DG SANCO (for health-related aspects) and DG JFS. As noted, some of these bodies also operate dedicated IP service activities for firms. Actual ‘field work’ in the area of IP (enforcement) service provision is the task of each Member State who also has different authorities and service-offering institutions working in this area concurrently. Securing an effective and efficient coordination, and thus avoiding white spots as well as redundancies, may be regarded as a prime factor for the success of any IP-enforcement related strategy.

4.2 Speakers and discussants abstracts

Georg Buchtela (Head of Intellectual Property Management, Austria Wirtschaftsservice) discussed the Council Directive of 2004 on IP Enforcement (Enforcement Directive), and presented the experience of running a support service for SMEs in this area in a multinational context, also involving third countries. In particular, he highlighted main success factors, such as going past territoriality concerns in technology transfer activities, the option of having such services run at EU level and the bridged link between innovation and IPR support.

The Directive of 2004 on the enforcement of intellectual property rights mainly addresses questions of how European enterprises can build a solid IPR foundation for the purposes of the Internal Market. However, in times of globalized trade and rampant IPR violations, this by itself is insufficient for protecting European innovations. In order to curb IPR infringements effectively, registered IP rights in home countries of infringers are the necessary basis for any local enforcement action. They are also a precondition for any legal technology transfer that benefits the inventor in real terms. Emerging markets are increasingly becoming licensee countries. AWS, through its Innovation Protection Programme, IPP, has been building the following assets since its establishment in 2007:

- comprehensive expertise and networks, especially in its focus countries: China, India, Russia.
- synergies with related in-house services, such as market and technology research; marketing of inventions on a “no result, no fee” basis; bank guarantees for internationalization projects, etc.
- both operative and financial support for IP registration in non-OECD countries, as warranted by the individual SME’s market and infringement situation
- actively seeking out Austrian patent applicants, informing them about the program, and giving them a specific, competent contact person
- Two aspects of IPP need to be emphasized from a policy point of view:
- Non-restriction in the territorial sense: There is no requirement that companies commercialize technologies within Austria before they transfer them abroad in order to qualify for IPP support (practical reasons include the small size of the domestic market and the fact that many innovations are in very small niche markets; policy reasons include applicable DG Research Recommendations)
- ‘Missing link’ function between innovation- supporting and IP-supporting institutions: Clients can receive IPP support throughout the innovation process, from first market potential analysis through establishment of useful and affordable industrial property rights, up to and including enforcement. They can apply for support at any given point in the process.

IPP- like programs would probably be much more cost- effective and efficient on the level of ‘the EU’ instead of individual member states; cf. the IP attachés at US embassies. A ‘Bonus feature’ could be established if programmes like IPP were to become standard across the Union, they would go some way to alleviating the current data paucity regarding IPR enforcement in third countries as benefiting SMEs would share their experiences willingly.

Erik Jansen (Legal Affairs Director, European Telecommunications Standards Institute (ETSI)) discussed the interaction between standards and IPR, which can be regarded as key subject for achieving and securing higher innovation activities.

In an information and communication technology (ICT) oriented world, standards are a key driver for innovation. Intellectual property rights (IPRs) play an important role in standardization, especially in the ICT sector. IPRs are very likely to be incorporated into standards and other deliverables elaborated by standardization organisations, and in the preparation of those documents, IPR issues may arise. There is an inherent tension between standards, which are destined for a free, collective use, and IPRs, which are intended for a private and exclusive use.

Standardization organisations need to provide solutions for this tension, taking into account all different interests involved and offer a transparent standardisation process that fosters technical contribution and technology competition and secures at the same time a stable legal environment that allows the implementation of standards. ETSI's IPR Policy provides a solution for the above mentioned tension by requiring an early identification and disclosure of essential IPRs included in a standard and by making such information available to the public through the ETSI IPR Online Database (<http://webapp.etsi.org/ipr/>). Further, by ensuring the future applicability of the standards in full respect of the rights of the IPR owner by requesting irrevocable licensing undertakings under fair, reasonable and non-discriminatory (FRAND) terms and conditions. As a complementary rule, ETSI is not involved in any commercial discussion on IPR matters and there is no technical reservation for the inclusion of IPRs in standards.

In recent years the situation for standards and IPRs has become more complex as more parties and an increasing number of IPRs are involved and new business cases focussing purely on the monetary exploitation of IPRs have appeared in connection with the implementation and use of standards. Further, standards are nowadays often used or required to be used on a global level, in particular in the ICT area, so that the complexity with regards to IPR is not only restricted to Europe.

Overall, the ETSI IPR Policy provides a very good solution to the tension between standards and IPRs through its set of self-regulations, which are suitable to solve the bigger part of the problems already at the outset, however, not all cases of abuse or systematic problems of the applicable legal systems can be resolved by such self regulation. In order to maintain and achieve the positive goals of standardisation the specific situation of standards and IPRs requires high attention and recognition within the different applicable systems of protection and enforcement of IPR.

Shalini Saxena (Policy Officer, German Federal Ministry of Education and Research) discussed issues arising in international R&D collaboration endeavours. In particular, she focussed on the topic technology and knowledge transfer and presented key aspects of the 'IP Code of Practice' introduced for this purpose by the Commission.

International Cooperation in the field of research is becoming increasingly important. Not only the Framework Programme with its funding for international cooperation but also the European Institute for Technology and Innovation, EUREKA and its recent cooperation agreement with South Korea and the European Research Area (ERA) initiatives are addressing topics such as international cooperation and knowledge transfer.

In order to explore new markets and to increase their competitiveness industry and SMEs are getting increasingly involved in international research projects cooperating with partners situated in non-European countries. Another important incentive for this strategy is to gain new knowledge and technology. Problems may arise however when dealing with third countries without the necessary knowledge of the rules on intellectual property when trying to get access, to protect research results or even to transfer knowledge.

A professional management of IP as well as guidance on international research cooperation is useful for stakeholders when negotiating contracts and IP with third countries to make sure fair and equal rights have been considered. Therefore initiatives such as the IPR-Helpdesk for SMEs in China are of great value to support SMEs in questions relating to IPR.

Based on the German Presidency 'IP Charter Initiative' in 2007, the Commission adopted a Recommendation on the management of intellectual property in knowledge transfer activities and Code of Practice for universities and other public research organizations in April 2008. The Council welcomed and supported the Recommendation and invited all Member States and stakeholders to implement and promote the Recommendation and Code of Practice.

To support the take up of the Recommendation and exchange best practice CREST decided to set up a working group on knowledge transfer consisting of representatives of Members States and Associate Countries. The group faces questions such as how intellectual property could be dealt with effectively in the context of the globalization and which support should be provided to the stakeholders. Which policy could be developed to exploit project research results efficiently? How can fair and equal access and transfer of knowledge be achieved when cooperation in a globalized economy? For EUREKA these questions are of utmost importance. EUREKA is expanding globally. Third countries are interested in an association and even projects as well as EUROSTARS Programme are giving responses to the globalization with international project partners.

Practical solution need to be found which will be helpful for all European and national initiatives and programmes even for policy makers.

George Whitten (Vice-President, Patent Counsel, Qualcomm) elaborated on the European patent system, its problems and strengths, what makes a 'good patent' and enforceability issues.

What does Europe have? The answer should be: a pretty good system; certainly influential as a.) EPC provides a model used by most of the world in granting patents b.) the German model is followed in many countries in Asia and c.) the UK model is followed in many Commonwealth countries. This prompts some carefulness if changes are to be effected in order to improve the situation (the underlying principles go back nearly 600 years, and were first defined in Venice in 1474).

Where are the problems? a) The EPO has a backlog of applications, the average delay being 7 years (only Japan is worse). b) Furthermore, the European judicial enforcement system remains 'balkanized'; patentees rush to patent friendly jurisdictions; defendants rush to slow/hostile jurisdictions, and the different speeds lead to a situation of 'gamesmanship'. In addition, there is bifurcation of infringement and validity in Germany. Running separate actions in multiple national courts is expensive and therefore exclusive.

What is a 'good' patent? The underlying principles have to be recalled. A patent is a balance between the description of an invention in sufficient depth for it to be carried out by others, the protection that the patent gives for the invention and certainty that the invention is patentable.

How are patents used and why do we need them? Patents are seen by many only as a 'badge of honour' or a defensive mechanism against other patent holders. However, patents are essentially economic tools to: enable companies to get financial backing and a return on their investment, allow companies to share inventions knowing that their ideas are protected. They allow companies to prosper with new products, or to develop follow-on innovations.

How can the system be improved? Three important paths have to be taken: a) By increasing confidence in patents, b) by clearing the backlog and c) by achieving consistency in the courts. As concerns the first point, it is especially the 'patentability' that creates the most uncertainty. Patentability is measured relative to the prior art and it is therefore inadequate searching for prior art during the application procedure that is the underlying problem. The quality is to be improved at the source – during prosecution, not after grant. A focus has to be set on searching prior art. Patent offices have resources to do this and should make those resources more accessible to users. Revocation rates in opposition proceedings and invalidity actions should be used as measures of EPO work quality – high rates indicate inadequate official searching. Concerning the backlog issue, it is important to not confuse productivity with quality. A focus on productivity can lead to lower quality. In this context, patent offices should install incentives on quality over quantity. And, eventually, resources of the national patent offices should be called upon. The last point – consistency in courts – refers to the legitimate demand that validity should be treated the EPO and national courts. The treatment of infringements should also be treated consistently across courts (and considered at the same time as validity). Ideally, a single Community-wide court with experienced IP judges should be aimed for.

Malte Behrmann (General Secretary, European Game Developers Federation) outlined the main thoughts of major players in the (computer) games industries on IPR, and outlined why game development and the respective industry can be regarded as innovation drivers and also perhaps as a blueprint how innovative industries can handle the problems associated with IP enforcement/piracy through new business models.

The European Games Developer Federation represents the interests of the creative studios in Europe that make computer games. Game development studios include small enterprises of 10 people or less, typically making casual and mobile games, whilst console and PC game developers for the current and next generations of consoles can be from 50 to 200 people, working in a process that takes about two years per game.

The EGDF represents some 600 studios based in Austria, Belgium, Denmark, Finland, France, Germany, Luxemburg, the Netherlands, Norway, Spain, Sweden, and the United Kingdom, which together employ over 17,000 people. The European computer and video games industry, including distributors and students in game educations, encompasses over 100,000 jobs. None of them existed 25 years ago.

Games and interactive content are likewise of increasing cultural and technological importance in the integrated world of TV, Internet and telephone. The game industry has developed new business-models, which could serve as blueprint for the internet of the future in the field like anti-piracy, micropayment etc. The link between business models and technology can be examined in the games-industry. Regardless of the eventual control over gateways and transmissions, there will be an increasing demand for interactive content production in itself. Games are also an important driver for hardware and network technologies. But from an SME viewpoint, the barriers to market entry are significantly high.

The value chain within the game industry has considerably changed over the recent years. Driven by new, disruptive business models and piracy proof server based solutions, online games from Europe have become surprisingly strong within the worlds game industry - originally dominated by non-European players.

Today some of them reach out to the world with more than 40 million registered users. The basis for this development is a non-discriminatory internet, based on principles like net-neutrality.⁽²⁾ This strong growth and innovation can only be preserved when the core of the internet remains a free communication space. There is a risk for Europe, when distribution-bottlenecks from the "offline world" become leveraged into the 'online space' by the misuse of regulatory measures beyond the control of independent judges. The EGDF therefore encourages the European Parliament to stand firm on its position to see the free internet as a chance and not as a danger for Europe.

Bernd Hugenholtz (Professor of Intellectual Property Law and Director of the Institute for Information Law, University of Amsterdam) made his contribution on the topic 'Towards a Coherent European Copyright Policy'. He argued that a true internal market has to be established in order to overcome issues arising from the territoriality principle. In essence, he declared the past efforts of harmonising copyright laws to fall short of this necessary goal.

Since the 1980s the European Community has carried out an ambitious program of harmonisation of the law on copyright and related (neighbouring) rights, with the primary aim of fostering the Internal Market by removing disparities between the laws of the Member States. This program has resulted in no fewer than seven directives on copyright and related rights that were adopted in a 10 year interval between 1991 and 2001. While the seven directives have created a measure of uniformity between the laws of the Member States, they have largely ignored the single-most important obstacle to the creation of an Internal Market in content-based services: the territorial nature of copyright. Despite extensive harmonisation, copyright law in the Member States is still largely linked to the geographic boundaries of sovereign states. Consequently, copyright markets in the EU remain vulnerable to compartmentalisation along national borders. Even in 2009 content providers aiming at European consumers need to clear rights covering some 27 Member States. This clearly puts them at a competitive disadvantage vis-à-vis their main competitors outside the Union, such as the United States.

If the Community is serious about creating an Internal Market for copyright-based goods and services, it must inevitably confront the problem of territoriality in a fundamental way. This would imply the adoption of a Community Copyright Regulation (or European Copyright Law) to replace the existing directives and partially pre-empt the national laws on copyright of the Member States. Besides its deregulatory effect, a regulation of this kind might provide a certain 'rebalancing' of rights and limitations, in order to rectify the overprotection resulting from 15 years of 'upwards' harmonisation.

² 'Network neutrality is best defined as a network design principle. The idea is that a maximally useful public information network aspires to treat all content, sites, and platforms equally. This allows the network to carry every form of information and support every kind of application. The principle suggests that information networks are often more valuable when they are less specialized – when they are a platform for multiple uses, present and future' (Wu, 2009).

It is therefore high time for the legislative bodies of the EU to start developing a consistent and coherent vision of the law of copyright and related rights at the EU level. Such a vision is hard to interpolate from the seven directives of the Community acquis. The recent debate on the Term Extension Proposal is a shameful illustration of the normative vacancy of European legislation in the field of copyright and related rights. In the absence of guiding principles and policies, lawmaking in Brussels seems to be driven solely by the agendas of major stakeholders.

Because few normative principles can be inferred from the mere aim of establishing a single market, it would be a mistake to leave to the Directorate General in charge of the Internal Market the primary responsibility for developing the Commission's future copyright policies. Although several other Directorate Generals seem to be better qualified to take on this role, it would be essential at any rate to better coordinate the norm-setting process in the field of copyright and related right within the Commission. This could be achieved, for example, by creating a Coordinating Committee charged with developing coherent and socially responsible EU copyright policies and coordinating policies between the DGs.

Giancarlo Migliori (Founding Director of MrGoodIDEA) focussed his contribution on the growing relationship of finance and IP.

What is happening in the world: Large corporations increasingly manage & trade IP as Key Assets (SMEs often do not even patent); U.S. specialist IP funds can now invest, trade or speculate with up to US\$ 7-8 Billions; IP-Based financial instruments are now quoted on U.S. stock exchange; by 2012 there will be a world-wide IP exchange based in the USA; China's prime minister stated that future competition is 'IP Competition'. CHINA is the fastest growing IP economy and Chinese Banks started lending against IP. U.S. Venture Capital Funds invest three times more on companies with IP than without; and, eventually; innovation is beginning to flow both ways: Developed to Developing countries and vice-versa.

The consequences of these developments are that administrative and legal changes are driven by the 'New Financial relevance of IP'. If Europe is looking to Innovation and IP as drivers of competitiveness and growth, more dynamic IP policies, more finance for IP and an IP marketplace are needed. That would be consistent with the true industrial situation in Europe, torn between 2 strategies: 1) to enhance the technological contents of its output (call it a high-tech strategy) and 2) to improve and accelerate the development of existing tech contents 'all-tech strategy'. Most Countries are obliged to follow this 2nd strategy, for lack of time and resources. That requires more dynamic innovation & IP demand + supply + matching of the two (i.e., trading).

Some suggested actions: While improving a) access to IP by all EU Enterprises, especially SMEs, and b) the functioning and cost of patenting at national and specially EPO stage, EU policies should concentrate on the weakest area : private finance for innovation and IP. To do that, it seems necessary to extend the typical R&D bias (upstream phase) to also include applied innovation (downstream). Furthermore, it should be aimed to extend the historical high-tech bias to include all-tech (covering low-to-mid-to-high technologies), and to extend the historical large firm bias to include firms of all sizes (micro to medium-sized to large enterprises). Most important of all: More funding should be provided to the Specialist IP finance sector (n.b. different from IP agents).

Examples of huge benefits awaiting Europe with these changes: More of the huge funding burden of EU innovation is to be taken by the private sector (like in the U.S.). The creation of much needed financial exit strategy for EU Countries with insufficient appetite for tech risks by stock exchanges, VC sector or Banking – i.e., a dynamic IP market would finance start-ups, spin-offs etc. even better than in the U.S. thanks to a mix of public and private IP finance. In this context, it is interesting to note that the anti-crisis value of IP is better than any other asset (between 2005 and 2008, S&P portion regarding IP lost 5% against 25-to-50% by all other assets!)

Francisco Mignorance (Senior EU Policy Director, Business Software Alliance) elaborated on the threat of online piracy and the need to have those addressed by European institutions (especially the European Parliament and the European Commission).

Online piracy presents a serious and immediate threat not only to software developers but to all copyright-based industries. Far more the consequences of piracy go beyond the billions of Euros in lost revenue for businesses every year. Piracy has substantial effects on the nation's economic health, employment and investment. Today's massive piracy also lowers tax revenues at a time of increased budgetary pressure for Governments.

A strategic and coordinated response from the European Commission and the European Parliament is essential to ensure that effective and coherent measures are put into place with all Member States. The European Parliament has an important role to play in ensuring that enforcement measures meet minimum legal standards – for example due (fair) process before any sanctions can be imposed by courts or administrative bodies- and that such measures remain technologically neutral – for example by avoiding the imposition of 'blanket' anti-piracy filtering technologies (by law or court decisions) that could hamper innovation and lead to reduced performance or decreased interoperability between systems and applications.

Finding an appropriate balance between property rights and the right to privacy will also be a challenge that this Parliament and the new Commission must meet as it is ultimately important not to lose track of the fact that the vast majority of individuals and businesses use software, computers, and the Internet for a myriad of legal and legitimate personal and business reasons.”

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Appendix – Workshop Programme

	13-14 October 2009 • European Parliament, Brussels	
1st European Innovation Summit		
Towards an Intellectual Property Rights Strategy for Innovation in Europe*		
<i>European Parliament, Brussels, Room ASP5 G3</i>		
<i>Tuesday, October 13, 14:00-18:30</i>		
14:00 – 14:30		
Chair	Paul Rübige, Member of European Parliament	
Keynote	Margot Fröhlinger, Director, DG Internal Market, European Commission	
14:30 – 15:45	Panel 1: European Patent System	
Moderator	Jos Leijten, K4I President, Joint Institute for Innovation Policy, TNO	
Panellists		
András Jókúti	<i>Deputy Head of Legal and Intl. Department, Hungarian Patent Office</i>	
Stefan Luginbühl	<i>Legal Advisor, International and Legal Affairs, European Patent Office</i>	
Paul Iske	<i>Chief Dialogues Officer, ABN AMBRO Bank</i>	
Alexander Ramsay	<i>Deputy Director, Division for Intellectual Property Law, Ministry of Justice, Sweden</i>	
Margot Fröhlinger	<i>Director, Knowledge-based economy, DG Internal Market, European Commission</i>	
Thomas Tindemans	<i>Head of Public Affairs Group, White & Case</i>	
Edit Herczog	<i>Member of the European Parliament</i>	
16:00 – 17:15	Panel 2: International Protection and Enforcement of IPR	
Moderator	Simon Dewulf, CEO, CREAX	
Panellists		
Georg Buchtela	<i>Head of Intellectual Property Management, Austria Wirtschaftsservice</i>	
Shalini Saxena	<i>Policy Officer, German Federal Ministry of Education and Research</i>	
George Whitten	<i>Vice-President, Patent Counsel, Qualcomm</i>	
Erik Jansen	<i>Legal Affairs Director, European Telecommunications Standards Institute</i>	
Pedro Velasco-Martins	<i>Principal Administrator, Enforcement of IPR in Third Countries, DG Trade, European Commission</i>	
Paul Rübige	<i>Member of European Parliament</i>	
17:15 – 18:30	Panel 3: IPR in the Digital Environment	
Moderator	Ramon van der Riet, Inventor	
Panellists		
Bernt Hugenholtz	<i>Professor of Intellectual Property Law and Director of the Institute for Information Law, University of Amsterdam</i>	
Francisco Mingorance	<i>Senior EU Policy Director, Business Software Alliance</i>	
Malte Behrmann	<i>European Game Developers Federation</i>	
Giancarlo Migliori	<i>Founding Director of MrGoodIDEA</i>	
Antoine Aubert	<i>European Copyright Policy Counsel, Google</i>	
Christian Engström	<i>Member of European Parliament, Swedish Pirate Party</i>	
*This Session is jointly organised with STOA and part of a STOA Project		