

# **The Present State of the Patent System in the European Union**

## **As Compared with the Situation in the Unites States of America and Japan \***

Prof. Dr. Joseph Straus

Head of Department  
Max Planck Institute for  
Foreign and International Patent, Copyright and Competition Law  
Munich

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## Contents

Abbreviations	iii
Summary	v
I. Introduction	1
II. The Present Overall “Design” of Patent Protection in the EU	5
III. The Community Patent Protection Scheme and Its Deadlock	12
(i) The Original Rationale for Community Patents	12
(ii) Basic Characteristics of the System Under the ACP	16
(iii) Obvious Deficiencies	17
(iv) Inherent Deficiencies of the EPC	23
(v) EPC Improvement Proposals of the EPO	27
(vi) Reactions to the Designed Strategies	41
IV. The Involvement of the European Union in Patent Law	44
(i) Regulation on a Supplementary Protection Certificate	44
(ii) Proposal for a Directive on the Legal Protection of Biotechnological Inventions	44
(iii) Green Paper on the Protection of Utility Models in the Internal Market	51
(iv) Regulation on the Application of Article 85 (3) of the Treaty of Rome to Certain Categories of Technology Transfer Agreements	51
V. International Developments	53
VI. Suggestions	60

## Abbreviations

ACP	Council Agreement Related to Community Patents
AIPLA	American Intellectual Property Law Association
AIPPI	International Association for the Protection of Industrial Property
CAFC	Court of Appeal for the Federal Circuit (USA)
COPAC	Common Appeal Court
CPC	Community Patent Convention
DNA	Desoxyribonucleic Acid
EPAC	European Appeal Court
ECR	Court of Justice of the European Communities, Reports of Cases before the Court
EIPR	European Intellectual Property Review
EPC	European Patent Convention
EPO	European Patent Office
EPOr	European Patent Organisation
FICPI	International Federation of Industrial Property Attorneys
F.S.R.	Fleet Street Report
GATT	General Agreement on Tariffs and Trade
GRUR	Gewerblicher Rechtsschutz und Urheberrecht
GRUR Int.	Gewerblicher Rechtsschutz und Urheberrecht, Internationaler Teil
IER	Intellektuelle Eigendom & Reclamerecht
IIC	International Review of Industrial Property and Copyright Law
IP	Intellectual Property
JPTOS	Journal of the Patent and Trademark Office Society
MITI	Ministry of International Trade and Industry
MIT	Massachusetts Institute of Technology
NAFTA	North American Free Trade Agreement
OECD	Organisation for Economic Co-operation and Development
OJ	Official Journal

PLT are	Treaty Supplementing the Paris Convention as far as Patents Concerned (Patent Law Treaty)
R & D	Research & Development
SMEs	Small and Medium-Sized Enterprises
TRIPS Rights	Agreement on Trade-Related Aspects of Intellectual Property
UNICE	Union of European Industries
UPOV	International Union for the Protection of New Varieties of Plants
US PTO	United States Patent and Trademark Office
USPQ	United States Patents Quaterly
WTO	World Trade Organisation

## Summary

1. 40 years after the adoption of the Treaty of Rome, the European Union, does not dispose of its own patent protection system. The dualism of patent granting procedures results in national or “European national” patents limited to the territory of the respective EU Member State, which in effect means a potential or implied fragmentation of the internal market. The EU does not provide for a unified EU-wide patent protection, nor does it have at its disposal any legal mechanisms or the judicial infrastructures to counteract the fragmentation of the internal market owing to the diverging interpretation of the scope of protection of European patents in national courts, as well as the diverging application of the EPC in revocation proceedings. Although the application of the rule of the EU-wide exhaustion of patent rights by the European Court of Justice apparently provides relief in that the free movement of products is secured once the products are put on the market in the EU by the patent owner or with his consent, the overall situation does not comply with the genuine legal and economic concepts of the internal market. As long as there is no EU-wide patent protection available on terms comparable with those governing national patent protection, mandatory EU exhaustion of the patent right obviously weakens the incentives for EU-wide innovation, something the patent system should provide for. Especially SMEs, which could not afford the cost for acquiring EU-wide patent protection under the present scheme, are affected. Hence, their innovative potential cannot be used to the best possible extent in the genuine economic interest of the Union.

2. In Japan and the United States, the two main global economic competitors of the European Union, patent protection is not affected by any kind of fragmentation. Inventors, in both countries, secure their interests country-wide, i.e. for markets of comparable size to that of the EU by filling one single application and by the grant of one single patent. Patents are revoked in one

centralized procedure and infringements eventually decided at final instance by the same national court.

3. The least one can observe on the EPC and ACP (CPC) and their designed interoperability is that from the outset these mechanisms, even if both bodies of law had entered into force simultaneously, would barely be able to achieve their entrusted goals in the medium and long term. If there are gears and a clutch between both, they are not visible and by no means synchronized. A body of law, like the inseparable twins EPC-ACP, which should be open to adjustments necessary due to the dynamics of technological and scientific development, as well as to the dynamisms of the political and economic development of the Community it should serve, cannot be subjected to diverging rules in command of different bodies, and above all, it cannot be separated from the political structures competent to legislate in its core area. How untenable this legal construction is, is best revealed by the fact that the Community may well adopt a regulation, even unanimously, or a directive, which would, for instance, open up patent protection for, say, computer programs, or introduce changes to the notion of "industrial applicability", yet this would have no affect on the EPC. In order to amend Art. 52 (2) (c) and 57 EPC, a Diplomatic Conference according to Art. 172 EPC, with the prescribed voting results etc., would be required. On the other hand, however, it should also be borne in mind that the twins were definitely designed to enter into force more or less simultaneously. In that case, notwithstanding all deficiencies of the underlying system, the mechanisms provided for under the CPC as regards the uniform effects of the Community patent, uniform testing of its validity, etc., would quite successfully fulfill their goals: the transitional period under Art. 86 (5) (b) CPC 1975, allowing for the option between the European patent and the Community patent (Art. 86 (1)), could be terminated after 10 years even by a qualified majority of the EC Member Countries, thus the entire system would then become operational. If, however, the ACP as adopted in 1989 entered into force at this point in time without any adjustments, taking account of those thousands of European patents with EU Member States designated in the last 20 years and those to be granted in the

next 10, 20 or more years under the optional scheme of the 1989 CPC, the ACP and especially its outstanding Protocol on Litigation, as well as its Protocols on the Common Court of Appeal would be deprived of most of their advantages for at least the next 20 years.

4. It follows from the above analysis and from the history of both Conventions that the European Union, in order to establish a **truely operational Community patent system** which would attain the Community goals and be comparable to that of its two main economic partners, Japan and the United States, should take appropriate action as soon as possible to transfer both the EPC and the ACP into the Community legal order following the examples of the Community Trademark and Community Plant Variety Rights. Solutions must be sought for the adequate and non-discriminatory treatment of non-EU Member States, present Contracting States to the EPC and of states having Extension Agreements with the EPO. As is revealed by Art. 8 of the ACP, such possibilities exist. By no means should the membership of non-Member States in the EPC be accepted as a pretext for a further deadlock. Since in many respects enormously effective and successful work was performed in 1989, less in fact has remained to be done as one might assume and, if the determined political will of the Community to realize its genuine goals exists, could also be done successfully. Two main areas have to be examined in more detail in this respect: the problem of translations and that of ensuring that European patents granted for Community Member States in the past or at least in the future can be subjected to the revocation procedure under the ACP scheme as well as to its Protocol on Litigation. Since it is clear that the EPC seems to be in need of amendments also as far as the patentable subject matter is concerned and in respect to some patentability requirements and of its rules as to the interpretation of claims, those possible amendments should be given serious consideration.

5. As is evident from the EPO Report on the "Cost of Patenting in Europe", the procedural fees of the EPO (9,900 German marks) are more than three

times higher than those of the US Patent and Trademark Office (3,000 German marks) and more than four times higher than those of the Japanese Patent Office (2,200 German marks). However, the financial burden for an applicant under the EPC scheme, as compared with the cost for official procedural fees to be paid by applicants in the US and Japan, is much worse when account is taken of the so-called validation costs of a European patent, i.e. expenditures necessary to validate a patent granted by the EPO in each designated state. Those expenditures include the cost for mandatory translations of the complete patent specification into the official language of each of the designated Contracting States and official validation fees of the national patent offices of those states. Taking into account that in a European patent on average eight Contracting States are designated, i.e. a market volume more or less comparable to that of the United States of America or Japan, the successful European applicant has to spend an average of 36,000 German marks as compared with the 3,000 German marks mentioned in the case of the United States of America or with 2,200 German marks in the case of Japan, but his patent still does not cover the entire Community area.

6. Worse and in terms of Community perspectives difficult to explain and justify are the figures if the annual renewal fees are included in the comparison of the official fees between the USA and the EPC: wherever eight Contracting States are designated, which means that nearly half of the EU Member States are not, the total cost for obtaining and maintaining a patent for its full term is about US \$ 120,000 under the EPC, whereas in the US the respective amount is only US \$ 13,000. As it has been pointed out, one must note that the principle of the exhaustion of the patent right applies in the Member States of the Community, thus in order to secure the same market volume in Europe as in the United States - with its national exhaustion - not only an American and Japanese but equally a European patent owner has to spend over ten times more.

7. As compared with the treatment of SMEs in the United States of America, where under Sec. 41 (h) (1) of the US Patent Act small businesses are

charged fees by a reduced rate of 50%, European SMEs are at disadvantage under the EPC fees regime, since they do not enjoy any preferential treatment.

8. Whereas inventors in the field of biotechnology in the US and, in principle also in Japan, are not faced with and thus not hampered by exclusionary provisions, under the EPC and the respective national patent provisions of the Member States they are. It appears that adequate relief is not provided for under the Commission's new Proposal for a Directive on Legal Protection of Biotechnological Inventions. Moreover, European inventors in the area of information technologies are also subjected to stricter legal constraints than are their counterparts in the US or Japan.

9. In the past the Community, unlike the USA, did not seriously view the needs of scientists, especially those outside industry, as a precious and increasingly economically important potential for innovation in the context of the current law in force. In particular, no efforts were reported to secure their patent rights in the Community. Scientists and inventors in academic research in the EU and their institutions, especially universities, are also at a disadvantage as compared with their counterparts in the USA with regard to the legal instruments supporting technology transfer of publicly funded research results by contractual means in intellectual property. Whereas the USA has developed respective strategies and adopted legal measures aimed at enhancing the technology transfer to the benefit of the national economy, nothing comparable exists in the EU.

## I. Introduction

1. Ever since the adoption of the Convention on the Grant of European Patents (European Patent Convention - EPC) in 1973 and its entry into force in 1977, Europe has apparently been proud of and satisfied by the adopted system and its operation. For a long time the EPC, an international Convention established outside the legal framework of the Treaty of Rome and open for membership from outside the Community, has been a success story. A continual increase in the number of patent applications received<sup>1</sup> and patents granted,<sup>2</sup> as well as an ever increasing number of Contracting States<sup>3</sup> reflected the general appreciation of the system. Despite the fact that the Convention for the European Patent for the Common Market (Community Patent Convention - CPC), neither as signed in 1975 in Luxembourg nor as adopted in the context of the Agreement Relating to Community Patents,

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<sup>1</sup>During the period from June 1, 1978 (Opening of the EPO) through December 31, 1979, a total of 15,151 applications was filed (1979 OJ EPO 257); the estimates for 1995 are in the region of 77,500, which is 7500 or 10.7% higher than previous estimates (see Report on the 60th meeting of the Administrative Council of the European Patent Organisation, 4 to 8 December 1995, 1996 OJ EPO 3).

<sup>2</sup>In 1992, for instance, EPO granted 30,408 patents (see EPO Annual Report 1992, Tab. 3.1, p.84), in the year 1994 42,001 followed (EPO Annual Report 1994, Tab. 3.1, p. 86).

<sup>3</sup>The membership has increased from 7 (Belgium, Federal Republic of Germany, France, Luxembourg, The Netherlands, Switzerland and United Kingdom) at the date of the entry into force of the EPC on October 7, 1977 (1977 OJ EPO 6), to 18 parties: Austria, Belgium, Denmark, Finland (as for the time being the last acceding member), France, Germany, Greece, Ireland, Italy, Liechtenstein, Luxembourg, Monaco, The Netherlands, Portugal, Spain, Sweden, Switzerland and the United Kingdom (1996 OJ EPO 1). Thus at present the membership consists of 15 members of the European Union and three non-EU member countries. Moreover, by signing Agreements on Extending the Protection Conferred by European Patents (Extension Agreements) with Slovenia (1994 OJ EPO 75), Lithuania (1994 OJ EPO 527), Latvia (1995 OJ EPO 345), Albania (1995 OJ EPO 803) and Romania (1996 OJ EPO 601), the European Patent Organisation has established a contractual network complementing the EPC providing for the choice of extending the effects of European Patents to non-contracting states by simple further designation and an extension fee of DEM 200.

done at Luxembourg on 15 December 1989,<sup>4</sup> did not enter into force and thus left EU Member Countries eventually with pure national or European national (bundle) patents only, gave rise to some concerns, obviously those concerns have not been serious enough as to allow the EU to overcome the existing respective deadlock.

2. This phase of complacency, however, suddenly seems to be over. Both insiders, in part founding fathers of the EPC,<sup>5</sup> and users of the European patent system<sup>6</sup> have raised their voices and started to point out the existing deficiencies of the system as well as to reflect on possible cures. Empirical studies indicating the high cost of the EPC for the user have been published.<sup>7</sup> Other empirical studies demonstrated a low propensity especially of small

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<sup>4</sup>OJ EC 1989 No. L 401 of 30.12.89, p.1.

<sup>5</sup>Van Benthem, *The European Patent System and European Integration*, 24 IIC 435-445 (1993); Schwartz, *Perspektiven der Angleichung des Privatrechts in der Europäischen Gemeinschaft*, 1994 ZEuP 569-584 (at 564); A. Krieger, *Das Gemeinschaftspatent - Ein Essential des Europäischen Binnenmarkts*, in: Due, Lutter, Schwarze (Eds.), *Festschrift für Ulrich Everling*, Baden-Baden 1995, pp. 701-717; Braendli, *The Future of the European Patent System*, 26 IIC 813-829 (1995); Bossung, *The Return of European Patent Law to the European Union*, 27 IIC 287-315 (1996); Rothley, *Why Parliament Must Think Again About Biotechnological Protection*, *European Brief*, March/April 1995, 60-61; Gallochat, *A Vote in Favour of America*, *European Brief*, March/April 1995, 61-63; Straus, *Patenting Human Genes in Europe - Past Developments and Prospects for the Future*, 26 IIC 920-950 (1995); Dybdahl Österborg, *Central Patent Administration in Europe and National Interests*, in: Straus (Ed.), *Aktuelle Herausforderungen des geistigen Eigentums*, Festschrift Friedrich-Karl Beier zum 70. Geburtstag, Cologne etc. 1996, pp. 29-36.

<sup>6</sup>J. Beier, *Actual Costs of Patenting in European and National Procedure - Results of a FICPI-Study*, 26 IIC 213-227 (1995); Kingston, *Reducing the Costs of Resolving Intellectual Property Disputes*, *European Journal of Law and Economics*, 2: 85-92 (1995); Lees, *Strategic Reflection on the European Patent Office*, *Patent World*, December 1995/January 1996, pp. 24-29; Tootal, *The European Patent System: Time for a Review?*, [1995] 9 EIPR 415-416.

<sup>7</sup>See, e.g. *Special Report: Cost of Patenting in Europe - a study conducted by the European Patent Office*, *Patent World* June/July 1995, pp. 26-30.

and medium sized Enterprises (SMEs) to make use of the patent system.<sup>8</sup> As a result of its own thorough analysis the European Patent Organisation, too, has designed strategies aimed at improving the situation.<sup>9</sup> The respective ideas and topics were presented to and discussed with interested circles.<sup>10</sup> Moreover, the EPO presented to its “Patent Law Committee” a so-called “package deal solution” on the problem of translation and validation of European patents.<sup>11</sup>

3. A closer look at the newly expressed concerns on the present state of the patent system in Europe reveals that they have some common denominators such as the desire to safeguard an expeditious, reliable and cost-effective patent granting system. On the other hand, the focal points differ, yet without contradicting each other as to their basic substance. These concerns can be grouped as follows:

Despite the existence of an internal market, the European Union has only succeeded in establishing a Community Trademark<sup>12</sup> and a Community Plant Variety Rights system<sup>13</sup> but not a Community patent. Thus, the potentially most important industrial property right, instead of providing incentives for EU-wide innovation and integration, may prove in many instances to be its obstacle. The design of the EPC, the basic idea of which has always been to rationalize the patent granting procedure, thus to provide not only a reliable but above all also cost-effective patent granting system, could eventually fail

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<sup>8</sup>The use of patent protection in Europe, EPOscript vol. 3, Munich 1994.

<sup>9</sup>EPO: Charting a course, Doc. CA/46/93e, CA/46/93 Add. 1e and Add. 2.

<sup>10</sup>See Doc. Hearing/PV1 of December 20, 1995 and the respective document of August 11, 1995.

<sup>11</sup>See Doc. CA/PL4/95 of April 5, 1995 and CA/PL10/95 of October, 1995.

<sup>12</sup>Council Regulation (EC) of December 20, 1993, on Community Trademark, OJ EC No. L11 of 14.1.94, p. 1.

<sup>13</sup>Council Regulation (EC) of July 27, 1994, on Community Plant Variety Rights, OJ EC No. L227 of 1.9.94, p. 1.

in this latter regard. The actual cost of a European patent eventually turned out to be excessive, for a number of reasons. Most of these reasons are explicitly or implicitly linked to the legal construction of the EPC, leaving no or very little manœuvring space for the EPO to provide for relief. Some reasons, however, are to be sought in the fact that the European Union has as yet failed to establish a clear common policy in this respect. Eventually, the expressed concerns relate to the fact that substantive patent law provisions of the EPC and thus far also the CPC have their roots in the early 1960s and have never been questioned either in the light of the subsequent revolutionary technological developments or under the aspect of the special needs of European inventors. Whereas the United States, in particular, has used the necessity to adapt its patent system to its obligations under the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), adopted under the auspices of the World Trade Organisation (WTO),<sup>14</sup> to modernize its law in other respects as well, the European patent system has remained virtually unaffected by these developments and appears immobilized.

The present study will examine these issues separately and will briefly compare the respective European situation with that of the United States and Japan.

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<sup>14</sup>Signed on April 15, 1994 at Marrakesh and entered into force on January 1, 1995.

## II. The Present Overall “Design” of Patent Protection in the EU

1. Prior to addressing the respective groups of concerns in some detail, it seems necessary to recall the existing state of the law. The most noticeable characteristic of the present state of the patent law in the EU is its **dualism**, i.e. the **coexistence** of two **different ways for obtaining patents with the same effects**, namely limited to the territory of the Member State for which they are granted. As mentioned at the outset, a Community patent, i.e. a patent which would cover the entire territory of the EU, have the same effects throughout the EU, which could be revoked centrally, etc., is not available due to the fact that a great number of EU Member States have not ratified the 1989 Agreement Relating to Community Patents.<sup>15</sup>

2. Applicants in the EU thus can choose between filing the patent application with national patent offices or with the European Patent Office. Depending on national patent laws, the filing of an application for a European patent, however, can also be effected with a national patent office.<sup>16</sup> If the national route has been chosen, in order to obtain protection in other EU Members, subsequent filings in those States are required, whereby the priority right under Art. 4 of the Paris Convention for the Protection of Industrial Property can be claimed. If the European route is chosen, all or some EU Member States can be designated. It should be noted that over 90% of European applications filed by EU nationals are based on a previous national application, subsequently claiming the right of national priority.<sup>17</sup> However, no matter which route is chosen, as a result of Art. 2 (2) EPC, patents granted by national patent offices of a respective Member State and patents granted by the EPO for that state **have the same effect and are subject to the same conditions**.<sup>18</sup> Moreover, they all end up in the administration of national

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<sup>15</sup>As of 1995 only Denmark, France, Germany, Greece, Ireland (ratified but not yet deposited), Luxembourg and the United Kingdom have ratified.

<sup>16</sup>In fact, almost 50% of European applications are filed with national patent offices who act as receiving offices (see EPO: Charting a course, Doc. CA/46/93e, no. 29).

<sup>17</sup>EPO: Charting a course, Statistics, Doc. CA/46/93 Add. 2e, p.23.

<sup>18</sup>Unless otherwise provided in the EPC. However, since national patent laws of the member states so far have been harmonized with those EPC provisions, i.e. Art. 63 and 64, Art. 2 (2) in practice does not affect the national supremacy in this particular respect.

patent offices, i.e. also patents granted by the EPO for the respective country.

3. Although under Arts. 99-105 EPC in the opposition procedure a European patent can be revoked in its entirety or in parts for all designated Contracting States, once a European patent has been granted and cannot be contested any more, like any other national patent, it may only be revoked under the law of each designated Contracting State, i.e. in the context of this report, under the law of a EU Member State, with effect for the respective territory, but only on the grounds set forth in Art. 138 EPC. Regardless of the fact that grounds for revocation in Art. 138 EPC and corresponding patent laws of the Member States no longer differ, it remains true that in order to get rid of a European patent granted for an invention that does not meet the patentability requirements, if the worst comes to the worst, 15 revocation proceedings are necessary, at least in theory. In practice, revocation suits in three or more countries of the Union are common. Quite apart from the enormous costs involved, the respective outcome may vary from Member Country to Member Country: a European patent, in principle, may be revoked in one, maintained in another and partly maintained or revoked in a third country. The obvious result is the fragmentation of the internal market for the products involved, despite the fact that the very **same invention** was extensively examined and the patent granted by the **same authority**, and although the **same grounds** of revocation have been applied.

4. In case of infringement of a European patent, the patentee, as in the case of a national patent, must sue the potential infringer before national courts of the Members according to the national rules governing court jurisdiction and according to the rules of the Community Convention on Jurisdiction and Enforcement of Judgements in Civil and Commercial Matters of 1968 (Brussels Convention). Arts. 5 (3) and 6 (1) of the Brussels Convention, which provide for jurisdiction of the courts of the Member States according to the place where the harmful event occurred - "forum delicti commissi" (Art. 5 (3)) or, where more than one defendant is involved, according to the domicile of any defendant - the co-defendant rule (Art. 6 (1)) recently gained importance, due to the fact that the District Court of The Hague started to use the mentioned two rules of the Brussels Convention in the so-called "Kortgeding" (summary) proceedings in patent infringement cases. According to this doctrine, courts of EU Member States also have jurisdiction for co-

defendants domiciled in other Member States and thus also for infringements committed in those states.<sup>19</sup> In the meantime the case law of the District Court of The Hague has been approved by Court of Appeal of The Hague, which led to extraterritorial injunctions in the widely publicized cases of Murex vs. Chiron and Hoffmann-La Roche vs. Organon Teknika.<sup>20</sup>

5. When **deciding on the infringement of European patents** national courts must apply national patent law provisions applicable according to conflict of laws rules, i.e. not necessarily *lex fori*. In order to secure, as far as possible, a harmonized interpretation of the scope of protection in all designated Contracting States of the European patent at stake, Art. 69 (1) EPC and the pertinent Interpretation Protocol provide for mandatory guidance: under Art. 69 (1) the extent of the protection conferred by a European patent shall be determined by the terms of the claims, but the description and drawings shall be used to interpret the claims. It is clarified by the Protocol that this provision is to be understood neither in the sense that the extent of protection is defined by the strict, literal meaning of the wording used in the claims, the description and drawings being employed only for the purpose of resolving an ambiguity found in the claims, nor in the sense that the claims serve only as a guideline and the actual protection may extend to what, from consideration of the description and drawing by a person skilled in the art, the patentee has contemplated. Instead, a position between these extremes shall be applied, combining a fair protection for the patentee with a reasonable degree of certainty for third parties. Notwithstanding this mandatory rule for the interpretation of the scope of protection of European patents, in practice infringement courts in different EU Member Countries arrive at diverging results when deciding on the infringement of the same patent by the same potentially infringing acts. This was best demonstrated in a series of decisions on the infringement of the European “Epilady” patent in

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<sup>19</sup>On the issue of extraterritorial injunctions handed down by the District Court of The Hague see Bertrams, *The Cross-Border Prohibitory Injunction in Dutch Patent Law*, 26 IIC 618-636 (1995).

<sup>20</sup>The Hoffmann-La Roche vs. Organon Teknika decision of December 14, 1995, has been published in IER 1996, afl. 1, pp. 35-48 (see especially pp. 42 et seq.). The Murex vs. Chiron decision of the same date so far has not yet been published but reported in Nauta Dutilh IP Newsletter Patents Special of December 1995. Note, however, that the European Court of Justice in *Shevill vs. Alliance Press* on March 5, 1995 held that Art. 5 (3) of the Brussels Convention - which like Art. 6 (1), is an exception to Art. 2 - should be construed narrowly. Under Art. 2 of the Brussels Convention the basic rule is that defendants should be sued before their home courts.

Germany, the Netherlands and the United Kingdom, respectively.<sup>21</sup> Here again fragmentation of the internal market is the unavoidable consequence of the design of the European patent system. Moreover, there is inequality under the law, wasteful duplication of work<sup>22</sup> and also an enormous waste of resources.<sup>23</sup>

6. The conflict between the effects of patent rights limited to the territory of one or more respective EU Member States and the basic goal of a “common market” and even more so an “internal market”, comprising the territory of all Member States, becomes inevitable as soon as the patent owner uses the exclusive right for subdividing the EU territory into separate areas. The solution found to overcome these adverse effects of nationally limited patent rights on intra-community trade by the European Court of Justice gave rise to the rule of **community-wide exhaustion of patent rights**. Under this rule, eventually, for instance a Danish or German patent right is exhausted community-wide, once the “patented” product is put on the market by the

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<sup>21</sup>Cf. e.g. Düsseldorf Court of Appeal, 1993 GRUR Int. 242 - Epilady VIII; Gerechtshof The Hague, 1993 GRUR Int. 252 - Epilady XII; UK Court of Appeal, 21 IIC 561 (1990) - Epilady United Kingdom; UK Patents Court, (1990) F.S.R. 181 = 21 IIC 860 (1990) - Epilady United Kingdom II. For an in-depth analysis of these decisions see Pagenberg, The Scope of Art. 69 European Patent Convention: Should Sub-Combinations be Protected? - A Comparative Analysis on the Basis of French and German Law, 24 IIC 314-345 (1993); and Drope, EPILADY - Subsumtion von zum Prioritätszeitpunkt unbekanntem und nicht naheliegenden, gleichwirkenden Verletzungsformen unter den Schutzbereich europäischer Patente, VPP-Rundbrief Nr. 3/1995, pp.80-87.

<sup>22</sup>As Professor Brinkhof, at that time Vice-President of the District Court, The Hague, pointed out in 1990: “It would appear that a real solution will only be possible if patent procedural law is harmonized and a European Patent Court is established. As long as these things are lacking, there will be inequality under the law. And there will also be wasteful duplication, because victims of infringement will have to take legal action in different European countries, where judges acting on the advice of experts will pronounce judgement independently on the same infringement.” (Brinkhof, The Extent of the Protection Conferred by European Patents - Problems and Suggestions, 21 IIC 488-497, at 495 (1990)). Since 1990 nothing has changed.

<sup>23</sup>It is virtually impossible to give exact estimates on the cost of patent infringement litigation. A study commissioned by the EC Commission published in 1987 (Bouju (Ed.), Patent Infringement Litigation Costs - A Practical Worldwide Survey, London 1987) reported the following **cumulated average** of the cost of the patentee or his successor in title only, for instance in United Kingdom of 430,125 US \$ (before High Court, Court of Appeal and House of Lords - as reported by Starr), op. cit. p. 86; in France of 55,060 US \$ (before Tribunal de Grande Instance, Court of Appeal and Cour de Cassation - as reported by Bouju), op. cit. p. 60; in Denmark of 122,600 US \$ (as reported by Budde), op. cit. p. 50; in Italy of 101,005 US \$ (before Tribunale, Court of Appeal and Corte di Cassazione - as reported by Introvigne), op. cit. p. 118. Thus, the cost of a patentee litigating patent infringement in Italy, UK and France, respectively, who would take advantage of all procedural remedies, according to these rather conservative estimates already in 1987 had to spend on average about 600,000 US \$. Today that amount most likely would be close to 1 Mio. US \$. Even bearing in mind the particularly high litigation cost in UK, litigating patent infringement EU-wide is an extremely expensive and for most SMEs rather not affordable exercise.

patent owner or with his consent anywhere in the EU. In other words, even a sale of the product in a EU Member Country, in which the product is not, or even could not - in the past - be protected, as for instance pharmaceuticals in a number of countries that are now EU Members, has the consequence that such a product can freely circulate throughout the community, i.e. may also be re-imported in the country where it is protected by a valid patent.<sup>24</sup> Hence, the patentee cannot oppose parallel imports of goods originally sold by himself or with his consent within the EU-area into the state(s) in which he holds the patent.

7. Consequently, a small or medium-sized enterprise holding a patent in one or few EU Member States not only has to accept free manufacture and marketing of its product in patent-free EU Member States, where he therefore has to compete with cheaper products not burdened with the same R&D expenses, but he has also to accept that his own exports to the respective markets, where he has to adjust the price to the prevailing conditions on that market, can be re-imported into the territory where he holds patents.<sup>25</sup> Having regard to the high cost of acquiring EU-wide patent protection,<sup>26</sup> and with regard to the high cost of patent infringement litigation, especially if actions are required in a number of EU Member Countries, having further regard to the re-importation of patented products exported to patent-free European countries, it may not come as a surprise that, as empirically established, to a significant extend SMEs in Europe do not take advantage of patent protection.<sup>27</sup>

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<sup>24</sup>European Court of Justice in *Merck vs. Stephar*, 1981 ECR 2063 = 13 IIC 70 (1982). For details reference is made only to Ullrich, *Patents and Know-How, Free Trade, Inter-Enterprise Co-operation and Competition Within the Internal European Market*, 23 IIC 583-621 (590 et seq.) (1993).

<sup>25</sup>At present the European Court of Justice, under Art. 177 of the Treaty of Rome, has an opportunity to reconsider its ruling in *Merck vs. Stephar*, in *Merck vs. Primecrown*, a case referred by the UK Patents Court, which regards the problem of parallel imports of pharmaceutical products from Spain to UK ([1995] F.S.R. 909). See also Mutimear, *Parallel Imports from Spain: Merck vs. Primecrown*, *Patent World* September 1995, pp. 16-19; same, *The Challenge to Merck vs. Stephar*, [1996] 2 EIPR 100-103.

<sup>26</sup>See *infra* nos. 31 et seq.

<sup>27</sup>This is revealed throughout the EPO (Roland Berger Institute) Study on the use of patent protection in Europe, EPOscript vol. 3.

8. 40 years after the adoption of the Treaty of Rome, the European Union does not have at its disposal its own patent protection system. The dualism of patent granting

procedures results in national or “European national” patents limited to the territory of the respective EU Member State, which in effect means a potential or implied fragmentation of the internal market. The EU does not provide for a unified EU-wide patent protection, nor does it have at its disposal any legal mechanisms or the judicial infrastructure to counteract the fragmentation of the internal market owing to the diverging interpretation of the scope of protection of European patents in national courts, as well as the diverging application of the EPC in revocation proceedings. Although the application of the rule of the EU-wide exhaustion of patent rights by the European Court of Justice apparently provides relief in that the free movement of products is secured once the products are put on the market in the EU by the patent owner or with his consent, the overall situation does not comply with the genuine legal and economic concepts of the internal market. As long as there is no EU-wide patent protection available on terms comparable with those governing national patent protection, mandatory EU exhaustion of the patent right obviously weakens the incentives for EU-wide innovation, something the patent system should provide for. Especially SMEs, which could not afford the cost for acquiring EU-wide patent protection under the present scheme, are affected. Hence, innovative potentials cannot be used to the best possible extent in the genuine economic interest of the Union.

9. In Japan and the United States, the two main global economic competitors of the European Union, patent protection is not affected by any kind of fragmentation. Inventors, in both countries, secure their interests country-wide, i.e. for markets of comparable size to that of the EU by filling one single application and by the grant of one single patent. Patents are revoked in one centralized procedure and infringements eventually decided at final instance by the same national court.

### **III. The Community Patent Protection Scheme and its Deadlock**

#### **(i) The Original Rationale for Community Patents**

1. Apart from the fact that the described situation of patent protection in the EU must now be viewed against the background of the recently realized internal market, it must also be recalled that the conflict resulting from the territorially limited patent rights with the fundamental objectives of the Treaty of Rome was appreciated as early as in the late 1950s. When the CPC eventually was signed in 1975, after a number of failed attempts to establish an EC Patent System, this was explicitly acknowledged in its Preamble, which reads *inter alia* as follows:

“The High Contracting Parties to the Treaty establishing European Economic Community,

DESIRING to give unitary and autonomous effect to European patents granted in respect of their territories under the Convention on the Grant of European Patents of 5 October 1973,

ANXIOUS to establish a Community Patent System which contributes to the attainment of the objectives of the Treaty establishing the European Economic Community and in particular to the elimination within the Community of the distortion of competition which may result from the territorial aspect of national protection rights,

CONSIDERING that one of the fundamental objectives of the Treaty establishing the European Economic Community is the abolition of obstacles to the free movement of goods,

CONSIDERING that one of the most suitable means of ensuring that this objective will be achieved, as regards the free movement of goods protected by patents, is the creation of a Community Patent System,

CONSIDERING that the creation of such a Community Patent System is therefore inseparable from the attainment of the objectives of the Treaty and thus linked with the Community Legal Order,...

2. The reproduction of large parts of the CPC Preamble seems appropriate for a number of reasons: first, it demonstrates the undisputable need of the EU for a Community Patent System and the incompatibility of the present overall design of patent protection in the EU with the fundamental objectives of the Union. The rule of EU-wide exhaustion is, as explained above, not a completely satisfactory solution. Secondly, the wording of the CPC Preamble reveals that in the EC patent protection in general and the necessity of adopting the CPC more specifically were viewed predominantly under the aspect that territorially limited patent rights form obstacles for the free

movement of goods within the EEC and cause the distortion of competition. Unlike the US Constitution,<sup>28</sup> which also authorizes the Congress to “promote science and useful arts by giving authors and inventors exclusive rights limited in time to their respective writings and discoveries”, the CPC, which was designed to establish “a system of law, common to the Contracting States, concerning patents for inventions”,<sup>29</sup> remained completely silent on the decisive function of the patent system to promote the technological, economic and social progress of the Community as a whole. This silence appears symptomatic for the legal treatment and political priority accorded to the patent system by the EU for a long time. Indeed, because of their territorially limited effects, in the context of the Treaty of Rome patents have been treated as a “necessary evil” which has to be exceptionally tolerated as an obstacle to the free movement of goods in the Community under Art. 36,<sup>30</sup> but, in the absence of a Community patent, not as an incentive for Community-wide innovation and as an instrument aimed at strengthening the overall economic potential of the Community. Despite the last phrase introduced into the Preamble of the Council Agreement Relating to Community Patents of 1989 (ACP), which reads:

“ANXIOUS to promote the completion of the internal market and the establishment of a European Technological Community by means of the Community Patent,  
CONVINCED therefore that the conclusion of the Agreement is necessary to facilitate the achievement of the tasks of the European Economic Community,”

nothing has really changed during the last six years. As will be shown later on, the discussion linked to the ratification of the CPC is dominated and overshadowed by problems for which a solution should have been found, had

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<sup>28</sup>Art. I, Section 8, clause 8.

<sup>29</sup>Art. 1 (1), CPC.

<sup>30</sup>Under the case law of the European Court of Justice (see *Sterling Drug*, No. 15/74 - Coll. 1974, 1163) the free movement limiting effects of patents have to be tolerated only having regard the rule of exhaustion. Cf. *Wägenbauer in Groeben/Boeckh/Thiesing/Ehlermann*, *Commentary on the EEC Treaty*, 3rd edition, Baden-Baden 1983, Art. 36 marginal notes 46, 48.

the EU treated the needs for its patent system with the same priority as its main global competitors.

3. Although it is an instrument exclusively aimed at serving Community objectives, from the outset the CPC was linked to the EPC, the latter providing for a patent granting procedure not limited to Community Member States, in functional and legal terms. As observed by François Savignon, General Rapporteur of the Luxembourg Conference, “It goes without saying that the Community Convention depends on the European Convention as the trunk of a tree depends on its roots. However, it is equally evident that without the Community Convention, the European Convention would represent little more than a remarkable technical advance in the art of granting properly examined patents with the greatest economy of means. Only the Community Convention constitutes an effective instrument of economic integration”.<sup>31</sup>

4. In another way the CPC also followed the EPC: it is the outcome of inter-governmental co-operation and was adopted in the form of an International Convention, thus outside the legal framework of the Treaty of Rome. Some observers are of the firm opinion that the failure of the CPC to enter into force is due to the fact that at the latest in 1985/86, when the Single European Act was negotiated and the establishment of the internal market under Arts. 8a (now 7a) and 100a was mandatorily vested in Community Institutions, the CPC should have been transferred into the Community legal order.<sup>32</sup> The reason being the fact that the approximation of laws is in continuous need of an overriding political impetus, i.e. it needs own authorities with own competences and own legal instruments.<sup>33</sup> Nobody can say whether CPC would have been already adopted, had it had the legal form of a Council Regulation, as has been assumed by Ivo Schwartz. However, having regard

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<sup>31</sup>Luxembourg Conference on the Community Patent, 7 IIC 91, 92 (1976).

<sup>32</sup>See Schwartz, 1994 ZEuP 564.

<sup>33</sup>Schwartz, *op. cit.* p. 565.

to the recitals of a great number of Council Directives on economically potentially far less important issues, no doubt should exist that in case of a Council Regulation on a Community Patent the role of Community patents as a powerful instrument of Community-wide innovation and thus an instrument aimed at improving the overall technological and economic performance and competitiveness of the Community on world markets, would have highest political priority. Accordingly, here one could agree with Ivo Schwartz, that it would also have had continuously high priority for the work of the Commission as a whole and an overall higher chance eventually of being adopted. The founding fathers of the EPC share the view that support from higher political structures for European intergration is badly needed for a successful accomplishment of the European Patent System. This has been stressed emphatically by J. B. van Benthem, the retired first President of the EPO, who warned that otherwise national interests could once again gain the upper hand. Van Benthem also pointed out that the patent system as an economic tool is firmly integrated in the political and economic systems of the main EU competitors in the world markets, namely the United States and Japan, but not in the EU.<sup>34</sup>

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<sup>34</sup>24 IIC 440, 443 (1993); along the same lines Bossung, 27 IIC 312 et seq. (1996); and Braendli, 26 IIC 821 (1995), who stresses that the Community urgently needs a new impetus and that it is doubtful whether technical and strategical considerations alone are enough to bring the 1989 Agreement into force.

## **(ii) Basic Characteristics of the System under the ACP**

5. Prior to examining the reasons for the deadlock of the CPC in more detail, its main characteristics shall be briefly summarized in the light of the important amendments introduced by the Protocol on the Settlement of Litigation Concerning the Infringement and Validity of Community Patents (“The Protocol on Litigation”) and by the two Protocols on the Common Appeal Court, adopted in 1989 in the context of the Council Agreement Relating to Community Patents (ACP):

Uniform effects of the Community Patent throughout the internal market;  
Uniform testing of validity at the second instance by the Common Appeal Court;  
Uniform enforcement in infringement proceedings by a single action before a single court against the same infringer for infringing acts in all Member States;  
No “forum shopping” due to uniform rules on jurisdiction for patent infringement litigation;  
Centralized interpretation of the EPC and CPC by a limited number of national courts, the Common Appeal Court and the European Court of Justice;  
Arts. 30 et seq. of the EC Treaty being supplemented by the so-called “economic clauses” relating to the exhaustion of the patent right and to contractual as well as compulsory licences;  
Reduction in costs by central administration of Community patents at the EPO.<sup>35</sup>

6. At first glance, the characteristics of the ACP seem to meet all the requirements for securing a EU-wide uniform and effective patent protection comparable to that provided for under the laws of the United States and Japan. Yet a number of important differences would still exist between those two systems and the European patent system if adopted in the combined/twin form of EPC and ACP.

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<sup>35</sup>As basically summarized by A. Krieger, one of the driving forces behind the ACP, *op. cit.* footnote 5, p.708.

### (iii) Obvious Deficiencies

7. From the outset the most debated and in its technical consequences still the most serious problem is that of the **language**. This does not come as a surprise, since the EU is a multilingual area in which cultural identity, always closely linked to language, understandably has high priority. Consequently, therefore, the language problem was intensely debated already in 1975 in Luxembourg. According to the compromise, finally reached, the applicant had to file with the EPO not only a translation of the claims in English, French and German, the working languages of the EPO, but also in one of the official languages of each of the Contracting States which does not have English, French or German as an official language (Art. 33 in connection with Rule 8 CPC). Moreover, Art. 14 (9) provided that no Contracting State may avail itself of the authorization given in Art. 65, Art. 67 (3) and Art. 70 (3) of the EPC. Thus, according to the CPC basic rule, the Contracting States were not allowed to require a translation of the specification of the Community Patent in one of their official languages. Although this basic rule was severely undermined by the possibility of reservations under the Transitional Provision of Art. 88, according to which any Contracting State was allowed to declare that it reserves the right to provide that a translation of the specification in one of the official languages of that State will be required, the effects of this transitional provision were eased by the fact that the translation could be submitted at any time following the grant of the patent because it was only a condition for the enforceability and not for the validity of the patent (Art. 88 (2)-(4) CPC). The link between the CPC and the European Communities was demonstrated in Art. 88 (5), which empowered the Council of the European Communities to terminate any reservation of that kind on a proposal from the Commission of the EC or from a Contracting State, by a unanimous vote.<sup>36</sup>

8. During the 1989 ACP negotiations, the basic rule applied to translation in the CPC was abandoned by the introduction of Art. 30. Under this rule the applicant is obliged not only to file translations of the claims in one of the official languages of each of the Contracting States which does not have English, French or German as an official language, but also a translation of the text of the complete specification. Thus, having regard to the present

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<sup>36</sup>See on details of the 1975 CPC language negotiations Singer, *Übersetzung der Patentansprüche und des gesamten Gemeinschaftspatents*, 1976 GRUR Int. 203-205.

membership in the European Union, under the 1989 CPC translations into 11 languages are required. According to the figures presented by van Benthem, the overall translation cost for one Community patent would therefore amount to about 44,000 German marks and the total cost of all translations involved in a Community Patent System per year adds up to almost 1 billion German marks. Van Benthem called this new ruling a fatal blow for the Community Patent and the ratification of the CPC as being equivalent to “putting a dead man on the throne”.<sup>37</sup> Thus, even without any other expenses involved in the European patent granting procedure, i.e. filing, search, examination, and other official fees, as well as the fees of patent attorneys,<sup>38</sup> the cost of translation of the Community Patent alone seems prohibitive for SMEs and, at best, unattractive to large enterprises.

9. In order to ease the rigid consequence of a failure to file the prescribed translations in due time, i.e. that such a patent is deemed void *ab initio*, Art. 30 (6) and Art. 88 (1) CPC 1989 provided for an **option** of the proprietor to notify in such a case to the EPO that, instead of the Community Patent, he intends to obtain a European Patent for the Contracting States for which he has filed translations. On the one hand, this option between a Community Patent and a European Patent, conceived as a transitional solution<sup>39</sup> but subject to termination only by a unanimous vote of the Council (Art. 81 (4) (5) CPC), reduces the risk of the applicant. On the other hand, however, it also considerably reduces the willingness of even those applicants who could afford the cost of a Community Patent to opt for it. The actual result of the availability of this option would be that whereas large, EU-wide operating enterprises could choose between the two alternatives, SMEs could not because of the high cost of either alternative. They would remain limited to national patents and thus also to territorially limited protection. In either case, fragmentation of the internal market would be perpetuated and the actual potential of a large single market could not be optimally used.<sup>40</sup>

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<sup>37</sup>24 IIC 44 (1993). According to the estimates offered by the EPO, this figure would be somewhat lower, but would still amount to about 30,000 German marks and more (see EPO Report on Costs of Patenting in Europe, 26 IIC 650 et seq., at 659 (1995)).

<sup>38</sup> See *infra* nos. 31 et seq.

<sup>39</sup>See Krieger/Brouër/Schennen, Die dritte Luxemburger Konferenz über das Gemeinschaftspatent vom 11.-15. Dezember 1989, 1990 GRUR Int. 173-179 (176-177).

<sup>40</sup>Cf. the critical analysis by Ullrich, Patentschutz im Europäischen Binnenmarkt, 1992 GRUR Int. 1-13 (at 11-12).

10. Although the Member States negotiating the ACP and CPC were fully aware of the problem of the high translation cost for the operation of the CPC, the reasons why they failed to ratify the APC are more complex and cannot be discussed here in any detail. It should suffice to mention that those reasons were linked, first, to **constitutional problems** as regards the ratification of the Agreement in some Member States, and, secondly, to the problems relating to **newly acceded Members**, and their respective patent laws. The latter had to be adjusted to the EPC Standards and the respective Member States took advantage of reservations possible under Art. 167 EPC.

11. The strong desire of the architects of the ACP to bring this Agreement into force parallel to the entry into force of the Single European Market, i.e. on January 1, 1993, is reflected in a "Protocol on Possible Modification of the Conditions of Entry into Force of the Agreement Relating to Community Patents", signed by all Member States together with the ACP. According to this Protocol, if on December 31, 1991 the ACP has not entered into force, a Governmental Conference of the Member States should have the power to amend, unanimously, the number of states which must have ratified the ACP in order for it to enter into force (Art. 1). In other words, under this Protocol the possibility is provided for a "Community Patent" without EU-wide effects! A pragmatic and well-meant idea, which, however, not only contradicts the fundamental objectives of the Single European Market, but which from the user's perspective also lacks most of the original attraction of a Community Patent. The failure of the first Conference convened under this Protocol at Lisbon in May 1992<sup>41</sup> clearly reveals that the legal instrument of an International Convention does not constitute an adequate "container" for the ACP, and that efforts of even the most skillful and devoted architects of law necessarily fail as soon as they attempt to settle economically highly sensitive matters internationally without at the same time being in command of the legal and economic instruments relating to those economic matters. In Europe, the Commission, the Council and the Parliament are the organs which are responsible for such matters and dispose of the means mentioned. As long as they do not take over the full responsibility for the Community Patent System, a development comparable to that preceding the adoption of TRIPS under the auspices of WTO will be witnessed in the context of the EU.

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<sup>41</sup>See Schäfers/Schennen, Die Lissaboner Konferenz über das Gemeinschaftspatent 1992, 1992 GRUR Int. 638-642.

12. The question then is how should the EU act? One should agree with van Benthem that “a dead man should not be put on the throne”, i.e. that the language problem, which by the same token is the fatal problem of cost and thus vital to the operability of the system, has to be solved first. However, it should also be borne in mind that a handicapped system as a whole should not be put in place before the necessary repairwork has been carried out and before it is ensured that the system can be repaired in the future, whenever necessary and appropriate. To refer to Savignon,<sup>42</sup> one should not attempt to cure the trunk of the tree without taking care of its roots, i.e. the EPC. Since the EPC and the CPC (APC) were designed as interactive units, it is necessary to ensure that both function properly and serve primarily the technical, economic, political and social environment in which they are meanwhile naturally, however not yet legally, embedded, i.e. the Single European Market. With all due respect to the three EPC Contracting States, non-Member States of the EU, and their legitimate interests, which have always to be borne in mind and safeguarded,<sup>43</sup> to ignore the fact that meanwhile all EU Member States are Contracting States of the EPC and thus the overwhelming majority of the membership, would constitute a form of blindness in the middle of seeing. But having regard to the clear “yes” of the European Court of Justice to Community competence to take legislative action in the core area of patent law as well,<sup>44</sup> it would be irresponsible and counterproductive for both the Community and its Member States to ignore the pertinent legal and economic aspects when acting in the framework of the EPC. Doubts are allowed so far, taking into account critical comments recently made. Some of them, which seem particularly to the point, should be called to mind:

“The national interests of the Contracting States have thus overridden the interests of the European patent system to such an extent that the system is now in jeopardy. It has gradually become too expensive for a large proportion of small and medium-sized firms, which thus no longer

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<sup>42</sup>Supra No. 12.

<sup>43</sup>Exactly the same applies to the interests of those states, who signed and ratified “Extension Agreements” with the EPOr (see supra, footnote 3) or will sign and put into force such agreements in the future.

<sup>44</sup>In *Kingdom of Spain vs. Council of the European Union*, of July 13,1995 (C-350/92), Nos. 22, 23, 1995 GRUR Int. 906. See also *Bossung*, 27 IIC 313 et seq. (1996).

have access to the centralized European patent grant procedure, and all for the sake of interests which, although they may be justifiable culturally, and perhaps even politically, are no longer justifiable in economic terms, because the practical needs of the economy are paramount. In moving the political and cultural problem of language into the sphere of the European patent system, the Contracting States have moved it into the economic sphere, where it does not belong. By doing so they have overshot the mark in the matter of retaining their natural cultural heritages. The fact that the European patent system is at risk because of this directly affects the subject of European integration within the Community.”

(Van Benthem, Dutch)<sup>45</sup>

“Strangulation of the European patent by compulsory translation into all languages.”

(Bossung, German)<sup>46</sup>

“The continuing decentralized administration of European patents in as many as 17 States, in spite of the Single Market and the Maastricht Treaties, is an anachronism for which applicants have to pay dearly. Enforcement is another area where European patent holders must still live with disadvantages unknown to their US and Japanese competitors in their own countries.”

(Braendli, Swiss)<sup>47</sup>

“The Contracting States except Luxembourg and Monaco have prescribed that a European patent will be deemed to be void *ab initio* unless a translation of the text, in which the European Patent Office intends to grant a European patent for that State, is drawn up in one of

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<sup>45</sup>24 IIC 441 (1993).

<sup>46</sup>27 IIC 304 (1996).

<sup>47</sup>26 IIC 821 (1995).

its official languages, cf. Art. 65 EPC. This fact is in my view undoubtedly the beginning of the patent system in Europe killing itself by overeating.”

(Dybdahl Österborg, Danish)<sup>48</sup>

13. The statements reproduced above, made independently by personalities of high integrity from four EPC Contracting States, three of them EU Member States, with detailed knowledge and understanding of the system and with no vested interest apart from that in the prosperity of the EU-economy, should be taken most seriously because they indicate that deficiencies must exist which are inherent in the EPC, and thus in the roots of the designed Community patent system.

#### **(iv) Inherent Deficiencies of the EPC**

14. When searching for potential inherent deficiencies of the EPC that are specifically relevant to the European Union, a number of aspects have to be borne in mind, which as yet have not been adequately considered:

All Member States of the Union are EPC Contracting States.

The EPC was conceived as the basis and the first stage of the Community patent system. As far as the subject matter eligible for protection, patentability requirements and the patent granting procedure are concerned, the ACP (CPC) completely relies on the EPC.

Apart from a Patent Administration and one or more Revocation Divisions (Arts. 6-8), and the Select Committee of the Administrative Council (Arts. 11-19), the CPC does not provide for additional organs of the EPO, the competence of the Select Committee being limited basically to amendment of the Implementing Regulations (Art. 16 (1) (b)), and to adoption or amendment of Financial Regulations, the Rules relating to fees and its Rules of Procedure (Art. 16 (2) CPC).

As is widely recognized and does not need to be emphasized here any further, the patent system is an instrument of economic policy, however,

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<sup>48</sup>Op. cit. footnote 5, p. 31.

not only of the national economic policies of the EU Member States but of the Community as a whole.

Under Arts. 2, 3 l) and m), 3 a) and 130 of the EC Treaty respectively, activities relating to the strengthening of the competitiveness of the Community industry, and the promotion of research and technological development also fall within the competence of the Community. In order to ensure that the conditions necessary for the competitiveness of the Community industry exist, the activity of the Community and the Member States is aimed *inter alia* at encouraging an environment favourable particularly towards the development of small and medium-sized undertakings throughout the Community, and at fostering better exploitation of the industrial potential of innovation, research and technological development policies.

It is affirmed by the European Court of Justice that the Community can legislate, on the basis of Arts. 100 a) and 235 EC Treaty, also in the core area of patent law.<sup>49</sup>

Community legislation does neither affect the EPC or the CPC directly. Instead: the EPC can only be revised in accordance with its Art. 172, i.e. by a Conference of the Contracting States which has to be prepared and convened by the Administrative Council. The President of the EPO may place before the Administrative Council proposals for amending the Convention (Art. 10 (2) (c) EPC); the ACP, and hence also the CPC, can also be revised by a Diplomatic Revision Conference only, which has to be convened by the President of the Council of the European Communities upon the request of a majority of the Community Member States (Art. 13 ACP).

National patent offices of the EU Member States will continue to grant national patents, regardless of whether or not the ACP enters into force.

15. The least one can observe is that from the outset, these mechanisms even if both bodies of law had entered into force simultaneously, would barely be able to achieve their entrusted goals in the medium and long term. If there are gears and a clutch between both, they are not visible and by no means synchronized. A body of law, like the inseparable twins EPC-ACP, which should be open to adjustments necessary due to the dynamics of

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<sup>49</sup>See supra no. 21 and footnote 42.

technological and scientific development, as well as to the dynamisms of the political and economic development of the Community it should serve, cannot be subjected to diverging rules in command of different bodies, and above all, it cannot be separated from the political structures competent to legislate in its core area. How untenable this legal construction is, is best revealed by the fact that the Community may well adopt a regulation, even unanimously, or a directive, which would, for instance, open up patent protection for, say, computer programs, or introduce changes into the notion of “industrial applicability”, yet this would have no effects on the EPC. In order to amend Arts. 52 (2) (c) and 57 EPC, a Diplomatic Conference according to Art. 172 EPC, with the prescribed voting results and subsequent ratification by national Parliaments,<sup>50</sup> would be required. On the other hand, however, it should also be borne in mind that the twins were definitely designed to enter into force more or less simultaneously. In that case, notwithstanding all deficiencies of the underlying system, the mechanisms provided for under the CPC as regards the uniform effects of the Community patent, uniform testing of its validity, etc.,<sup>51</sup> would quite successfully attain their goals: the transitional period under Art. 86 (5) (b) CPC 1975, allowing for the option between the European patent and the Community patent (Art. 86 (1)), could be terminated after 10 years even by a qualified majority of the EC Member Countries, thus the entire system would then become operational. If, however, the ACP as adopted in 1989 entered into force at this point in time, without any adjustments, taking account of those thousands of European patents with EU Member States designated in the last 20 years and those to be granted in the next 10, 20 or more years under the optional scheme of the 1989 CPC, the ACP and especially its outstanding Protocol on Litigation, as

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<sup>50</sup>The grotesque situation is best demonstrated by the developments accompanying the adoption of the Council Regulation on a Supplementary Protection Certificate, which led to the first revision of the EPC (Art. 63 - see infra IV (i)). Although this Regulation has been implemented into national patent laws of all EU Member Countries, a considerable number of Member Countries still has not ratified the amendment of Art. 63 EPC. Should the amendment enter into force prior to their ratification, according to Art. 172 (4) EPC they will cease to be parties to the EPC (!).

<sup>51</sup>See supra no. 14.

well as its Protocols on the Common Court of Appeal would be deprived of most of their advantages for at least the next 20 years.

16. It follows from the above analysis and from the history of both Conventions that the European Union, in order to establish a **truly operational Community patent system** which would attain the Community tasks and be comparable to that of its two main economic partners, Japan and the United States, should take appropriate action as soon as possible to transfer both the EPC and the ACP into the Community legal order following examples of the the Community Trademark and Community Plant Variety Rights. Solutions must be sought for the adequate and non-discriminatory treatment of non-EU Member States, present Contracting States to the EPC and of states having Extension Agreements with the EPO.<sup>52</sup> As is revealed by Art. 8 of the ACP, such possibilities exist. By no means should membership of non-Member States in the EPC be accepted as a pretext for a further deadlock. Since in many respects an enormously effective and successful work was performed in 1989, less in fact has remained to be done as one might assume and, if the determined political will of the Community to realize its genuine goals exists, could also be done successfully. Two main areas have to be examined in more detail in this respect: the problem of translations and that of ensuring that European patents granted for Community Member States in the past or at least in the future can be subjected to the revocation procedure under the ACP scheme as well as to its Protocol on Litigation. Since it is clear that the EPC seems to be in need of amendments also as far as the patentable subject matter is concerned and in respect of some patentability requirements and of its rules as to the interpretation of claim, serious consideration should be given to those possible amendments.

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<sup>52</sup>The policy of concluding Extension Agreements with EU non-Member States should, however, continue in view of its beneficial aspects for Community industry, as well as in its function as being the first stage in preparing the potential later EU accession of those states.

17. Since, realistically, even with a very determined political will of the Community to take such an action, this will take time, solutions should also be sought to ensure that the EPC continues to function to the best possible extent within its present legal framework. In this respect the EPO has presented a number of measures, especially measures aimed at reducing the present cost for applicants and patentees and also at solving the acute cost-inflating problem of translation.

### (v) EPC Improvement Proposals of the EPO

18. It takes time indeed to realize who the originator of the EPO's "Charting a Course" document was, in which under the sole responsibility of the then Swiss President of the EPO, Paul Braendli, strategies to improve the European patent system were presented to the public. Under its first heading: Starting Point: The EPO in Context, it contains the following statements:

"In 1992 Jacques Delors declared improving European industry's competitiveness - increasing its innovative dynamism - to be a "super-priority" of Community policy.

Since in the next century world markets will be dominated by new technologies, we can expect a race against time between the rival economic blocks.<sup>53</sup> What steps can be taken in parallel with the EC's policy of subsidizing research and development to make good these innovation shortfalls?

Does Europe need a Ministry of International Trade and Industry (MITI) on Japanese lines, an American MIT or a Carla Hills able to speak for Europe in the name of European industry?

Industrial property, and the patent system in particular, has an auxiliary function in the wider context of an economic system. This raises the question of **what role the European Patent Organisation (EPO) would play in the context of a unified European economic policy.**<sup>54</sup>

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<sup>53</sup>Charting a Course, No. 4, 5.

<sup>54</sup>Ibidem, Nos. 6, 7 (emphasis added).

The time has come to launch in Europe a well-planned and co-ordinated patent strategy on Japanese and American lines so that we can react effectively to the first warning signs of a slowdown in patenting activity. Patents are not a legal fiction, nor something desirable for their own sake, but a weapon to be wielded in the international battle for market domains.”<sup>55</sup>

One had to assume to be reading a statement made by a patent office of the Community trying to contribute its best to support the Community industry and commerce efforts to succeed in the global struggle for world markets. Each and every whole-hearted true European must have been absolutely delighted, if it were not for the last sentence of no. 7, which reveals the inherent problem and reads as follows:

“But the institutional framework of administratively and financially autonomous bodies within which a specialist Organisation of recognized technical competence such as the EPOr could co-operate with the central authorities to support this European economic and innovation policy remains to be defined.”

19. With all due sympathy for all points convincingly made, including those on the role of patents in promoting innovation, any discussion on EPO’s possibilities to “support this European economic and innovation policy” under the present legal regime of the EPC, even with the present ratio between EU Member States and non-Member States (15:3) seem rather limited. They would for sure become limited even further, once this ratio, for instance through accession of the states of Central and Eastern Europe, non-EU Member States, will become less favourable. Without the ACP (CPC), and as has been shown even with it,<sup>56</sup> the manoeuvring space of the European Patent Organisation, of the EPO and of its President to undertake the tasks mentioned and envisaged in the “Charting a Course” document is, to put it

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<sup>55</sup>Ibidem, No. 10.

<sup>56</sup>See supra no. 11.

very cautiously, quite restricted. This is revealed, first, by the Preamble of the EPC, expressing but the desire of the Contracting States “to strengthen co-operation between the states of Europe in respect of the protection of inventions,” which “may be obtained in those states by a single procedure for the grant of patents and by the establishment of certain standard rules governing patents so granted;” secondly, by Art. 1 declaring that under the EPC a system of law, common to the Contracting States, for the grant of patents for inventions is hereby established; thirdly, by Art. 10 dealing with the competence of the President; and fourthly, by Art. 33 dealing with the competence of the Administrative Council. Under Art. 33 (4) EPC this body, composed of the Representatives and the alternate Representatives of the Contracting States (Art. 26 (1)), is empowered to authorize the President of the EPO to negotiate and, with its approval, to conclude agreements on behalf of the European Patent Organisation with states, with inter-governmental Organisations and with documentation centres set up by virtue of agreements with such Organisations. Since these latter authorizations cannot be viewed separately from the Preamble and Art. 1 EPC, the work performed and the results achieved by the EPO already in the past with regard to the strengthening Europe-wide awareness of the merits of patents and their use, as reported by the President,<sup>57</sup> merit high esteem and, with additional financial support of Community organs, could most probably continue in the future even with more success even under the present legal regime.

20. When examining the three remaining envisaged strategies, namely (1) “Striving for a coherent, synergy-releasing system of appropriate patent protection throughout Europe”; (2) “Reducing the cost of patent protection in Europe”; and (3) “Enhancing the scope and value of European Patents”, however, against the existing legal background of the EPC less favourable prospects of either strategy have to be assumed.

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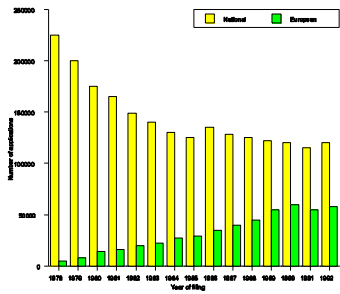
<sup>57</sup>Charting a Course, Nos. 73-90.

21. Under the EPO design, the main goal of the envisaged “**Strategy for a coherent, synergy-releasing system of appropriate patent protection throughout Europe**” has to be seen, on the one hand, in a much closer and more effective co-operation between national patent offices and the EPO under all aspects related to the operation of the EPC, i.e. national patent offices as receiving offices being equipped with modern telecommunication facilities, enabling simple and cheap filing of European patent applications, enabling hearings per distance using video conference equipment, etc., but on the other hand, and in the context of the strategy at stake more importantly, in re-establishing a financial equilibrium as regards the cost burden and revenue sharing between the EPO and national patent offices. According to the arguments expressed by the EPO, the (too) high cost of procedural fees at the EPO is partly due to the shift in filing activities of applicants in the Contracting States. As a result, the ratio between European patent applications and national patent applications in the Contracting States has changed fundamentally. Due to this development the overwhelming part of the workload of search, examination etc. has shifted from the national patent offices to the EPO.

### **Number of European and national applications filed in the Contracting States<sup>58</sup>**

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<sup>58</sup>Source: Charting a course, p. 9.



## Number of Applications in the Contracting States<sup>59</sup>

A Contracting State	B Year prior to EPC accession	C National applications before accession	D National applications 1992	E D as % of C
AT	1978	9384	2635	28.08
BE	1977	12526	1171	9.35
CH	1977	16343	3999	24.47
DE	1977	60401	43663	72.29
DK	1989	6754	1565	23.17
ES	1985	11298	2687	23.78
FR	1977	39978	16086	40.24
GB	1977	54423	27178	49.94
GR	1985	3158	587	18.59
IE	1991	4580	2995	65.39
IT	1977	24199	8547	35.32
LU	1977	2295	162	7.06
MC	1990	77	67	87.01
NL	1977	14629	2335	15.96
PT	1991	3555	1221	34.35
SE	1977	14979	3948	26.36

This changed situation, however, is not sufficiently taken into account under the present scheme for sharing the procedural and annual renewal fees, the EPO's only source of financing, between the national patent offices and the EPO. In this respect the Administrative Council plays a decisive role within the limits laid down in the EPC. The Administrative Council has the competence not only to fix the fees, procedural as well as renewal fees (Art. 33 (2) (d) in connection with the Rules Relating to Fees), but also to decide on the proportion of the renewal fees to be distributed between the EPO and the national patent offices. Until now Art. 39 (1) set forth that the maximum proportion of annual renewal fees to be paid to either party shall not exceed

<sup>59</sup>Source: Charting a course, p. 9.

75%. Currently the proportion is 50%. It is claimed by the EPO that in national patent offices patent renewal fees account for up to 80% of their funding, but the cost of those patents are to be borne by the EPO in the context of patent granting procedures. If the proportion is not changed in favour of the EPO so as to fully exploit the possibilities under Art. 39 (1), the procedural fees will continue to be too high and will thus reduce the attractiveness of the EPC for applicants.

22. Even more severe are the legal constraints as regards the strategy on **“Reducing the cost of patent protection in Europe”**, i.e. in probably the most sensitive and acute area of the present EPC operation. As the EPO Report on “Cost of Patenting in Europe”<sup>60</sup> has revealed, the procedural fees of the EPO (9,900 German marks) are more than three times higher than those of the US Patent and Trademark Office (3,000 German marks) and more than four times higher than those of the Japanese Patent Office (2,200 German marks). However, the financial burden for an applicant under the EPC scheme as compared with the cost for official procedural fees of applicants in the US and Japan is much worse, when account is taken of the so-called validation costs of a European patent, i.e. expenditures necessary to validate a patent granted by the EPO in each designated state. Those expenditures include the cost for mandatory translations of the complete patent specification into the official language of each of the designated Contracting States and official validation fees of national patent offices of those states. Taking into account that on average eight Contracting states are designated in a European patent, i.e. a market volume more or less comparable to that of the United States or Japan, the successful European applicant has to spend an average of 36,000 German marks as compared with the above mentioned 3,000 German marks in the case of the United States or of 2,200 German marks in the case of Japan. Internal Company expenses, patent attorneys fees etc. are not included in these figures.

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<sup>60</sup>26 IIC 650 et seq. (1995).

### Average Cost of a European Patent (8 designations)<sup>61</sup>

Cost (DM)	Company Total	External patent attorney	Translation	Official fees	
Activity	costs (incl. other costs)				
Preparation of the application	6,200	1,600			7,800
Procedure from filing up to grant (no translation assumed)	2,500	2,100		9,900	14,500
Validation (incl. translation) before national offices in 8 designated states		6,300	15,200	1,710	23,210
Overall	8,700	10,000	15,200	11,610	45,510
	19%	22%	33%	26%	100%

23. Worse and in terms of Community perspectives difficult to explain and justify are the figures if the annual renewal fees are included in the comparison of the official fees between the USA and EPC: where eight Contracting States are designated, which means that nearly half of the EU Member States are not, the total cost for obtaining and maintaining a patent for its full term amounts to about US \$ 120,000 under the EPC, whereas in the US the respective amount is only US \$ 13,000.<sup>62</sup> As it has been pointed out, one must be aware of the fact that the principle of the exhaustion of the patent right is applied in the Member States of the Community, hence in order to secure the same market volume in Europe as in the United States - with its national exhaustion - not only an American and Japanese but equally a

<sup>61</sup>Source: EPO Cost of Patenting in Europe Report, 26 IIC 660 (1995).

<sup>62</sup>See Helfgott, Why Must Filing in Europe Be So Costly?, 76 JPTOS 787 et seq., at 789 (1994).

European patent owner has to spend more than ten times more. The comment made by Helfgott in this respect reads as follows:

“One of the basic reasons for this disparity is the requirement for individual translations in each of the European Countries and the subsequent cost of individually maintaining patents in each of the European Countries. While everyone appreciates that this results from the separate national identities in Europe, from a commercial viewpoint, however, it is a unified market which has been splintered by individual national interests.”<sup>63</sup>

This comment must be taken seriously, since it applies equally to the artificial limitation of the use of innovation potential particularly of SMEs, who cannot afford the expense of EU-wide patent protection. The latter are also at disadvantage under the EPC system as compared with the treatment of SMEs in the United States of America, **where under Sec. 41 (h) (1) of the US Patent Act small businesses are charged fees according to a reduced rate of 50%.**<sup>64</sup>

24. The reasons for such high fees under the EPC are complex and have already been discussed by interested circles at length.<sup>65</sup> The overall expense for European industry for obtaining and maintaining patents in Europe in 1993 has reached the mark of 3.3 billion German marks,<sup>66</sup> thus representing a magnitude which cannot be ignored in macro-economic terms. However, this issue can be addressed in this paper only in the context of the respective

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<sup>63</sup>76 JPTOS 789 (1994).

<sup>64</sup>See for details Felfe, “Small Entity” - Status für Patentanmelder in den USA, 1996 Mitteilungen der deutschen Patentanwälte 10-13.

<sup>65</sup>See, e.g. J. Beier, 26 IIC 213 et seq. (1995).

<sup>66</sup>See the EPO Report, 26 IIC at 652 (1995), and Braendli, 26 IIC at 823 (1995). The share of official fees being: 415 million German marks - EPO procedural fees (13%); 400 million German marks - validating European patents (12%); 450 million German marks - renewal fees, including 150 million German marks for European patents (14%); 95 million German marks for national procedural fees (2.8%); 140 million German marks - PCT fees (4%).

EPC legal constraints and predominantly with an eye on the designed EPO strategy and suggestions made. The cause for costs and focus of criticism in this context is to be seen in Art. 65 EPC. Under this provision Contracting States may prescribe that for European patents not drawn up in one of its official languages, the applicant for or proprietor of the patent shall supply to its central industrial property office a translation of the complete specification in one of its official languages, within time limits prescribed. Under Art. 65 (3) EPC the Contracting States may prescribe that failure to meet those requirements results in the European patent at stake being deemed to be void *ab initio* in that state. Although Art. 65 EPC originally was viewed as an exception to be used only by a few Contracting States, in the meantime all EPC Contracting States except Luxembourg and Monaco require translations in their official languages. Interestingly, although no problems linked to the missing translations were reported, for instance in the United Kingdom and Germany, these two Contracting States after 10 (UK in 1987) and 15 years (Germany in 1992), respectively, made use of Art. 65 EPC. It is meanwhile established that for instance in the United Kingdom only some 2.5% of translations were ever consulted.<sup>67</sup> A similar situation is reported for The Netherlands.<sup>68</sup> The overall cost of translation is reported as being 305 million German marks and 125 million for attorneys fees and official fees of national patent offices.<sup>69</sup>

25. These impressive figures and the fact that under the present regime as well, patent applications (after 18 months from the filing or priority date

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<sup>67</sup>See EPO Doc. CA/PL4/95 of April 5, 1995, no. 2.

<sup>68</sup>Here the first President of the EPO, van Benthem, may be quoted:

“This means that 25,000 translations into Dutch are filed each year with the Dutch Patent Office, where they quietly gather dust and, as can be proved, are rarely consulted. If, as we know from experience, the cost of translation can be assumed to be around DM 4,000, then we are talking about a figure of +/-100 million per year which is added unnecessarily to the cost of European patent in The Netherlands.” (24 IIC 441 (1993)). According to Dybdahl Österborg, *op. cit.*, footnote 5, p. 32, in some countries less than 1% of translations are used. So far a different situation seems to exist in Spain, where 12,000 requests to inspect Spanish translations of European patents per year are reported (cf. Lees, *Strategic Reflections on the European Patent Office*, Patent World, December 1995/January 1996, p. 24 et seq. (at 28)).

<sup>69</sup>EPO Doc. CA/PL4/95.

respectively), are published only in one of the official languages of the EPO and translations filed only years later (after patent grant) without causing serious problems, urged the EPO to put forward for consideration to its Committee on Patent Law a "Package Solution" for the translation/validity issue. It proposes, in brief, a solution which in fact comes very close to that envisaged under the CPC 1975,<sup>70</sup> to which, however, a new improved form of an abstract should be added.<sup>71</sup> Eventually, according to the EPO suggestions, **the claims of the granted patent should be translated in official languages of each designated state** within time limits provided for the filing of translations of the complete specification under the current law. Two alternatives are discussed as to the **place of filing of these translations**, either with national patent offices or centrally at the EPO, as provided for under the CPC. **Translations of the full specification should only be required in the event of the patent being enforced against a third party.** The cornerstone of this EPO package solution should be an improved new abstract, which however, as the abstract presently mandatorily provided under Art. 85 EPC, would serve the purpose of technical information only. It would be designed so as to allow a clear understanding of the proposed technical problem underlying the invention, the solution of that problem through the invention and the principle use or uses of the invention. Furthermore, it would include an indication of the content of each category of independent claim present. For this new improved abstract the EPO has designed a general format with detailed instructions. Various alternatives as to who should produce the abstract are being discussed. It could be either the applicant, the EPO or possibly a subcontractor. Mandatory translations of the abstract into the official language of each designated state should preferably be provided by national patent offices, which would offer a genuine opportunity for work-sharing between the EPO, and the national offices. These abstracts could and should also form a stockpile for a new form of

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<sup>70</sup>See supra no. 16.

<sup>71</sup>See EPO Doc. CA/PL4/95.

patent documentation. According to the estimates of the EPO its suggestion would reduce the present cost of translation from about 15,400 German marks at present to about 2,700 German marks.<sup>72</sup> The EPO is further of the opinion that the suggestion made for the new improved abstract would not require any changes or amendments of the EPC. Of course, a change in the patent laws of the Contracting States would be required as to the use of Art. 65 EPC.

26. In the wake of the discussions on the problem of translation, an interesting suggestion has been submitted by an Observer State, Contracting Party of an Extension Agreement with the EPO. In view of the legal nature of any abstract under Art. 85 EPC, which is that it serves technical information purposes only, B. Pretnar, Director of the Slovenian Intellectual Property Office, suggested considering a new design for the description instead of the abstract, which should be composed of two parts, one being very compressed, similar to the “summary of the invention” generally contained in any specification, which, however, should be precisely structured. Only this part of the description, which would form part of the basis for the interpretation of the scope of the patent, should be translated into the official languages of each designated state parallel to the mandatory translation of the claims of the patent granted.<sup>73</sup>

27. In the context of the European Union, the fourth strategy: “**Enhancing the scope and value of European patents**” is of outstanding importance. If adopted, the ideas presented would no doubt be trend-setting for the patent system of the European Union for a long time. The starting point of this strategy is that according to the opinion of industrial circles the Community patent is generally regarded as stillborn, particularly due to cost factors. Therefore, it is stated:

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<sup>72</sup>See for details EPO Doc. CA/PL10/95. Cf. also Dybdahl Österborg, op. cit., footnote 5, p. 32, 33.

<sup>73</sup>See Pretnar, How to Reduce High Translation Costs of European Patents, [1996] 12 EIPR 665 et seq.

“If this prediction turns out to be true, the further development of the European patent system could be delayed for years. It is, therefore, in the interest of an integrated European patent system to seek alternatives approaching the idea of a Community patent. Such ideas have already been mooted at the Administrative Council.”<sup>74</sup>

The alternative envisaged is to incorporate into the European patent system the best features of the Community patent in the form of a “Supplementary Protocol”.

28. The proposed solution reads as follows:

The principle elements of the Protocol on Litigation would be made applicable to European patents, thereby ensuring common legal provisions for settling disputes concerning infringement, and the legal validity of European patents.

The substantive provisions of the CPC would be taken over.

COPAC<sup>75</sup> would be the court competent to deal with matters concerning European patents and the Boards of Appeal of the European Patent Office would be merged with it.

The concept of a unitary patent enshrined in Art. 2 CPC would not be taken over.

European patents would be administered by the European Patent Office. Annual renewal fees would be collected by the European Patent Office for every designated Contracting State; Art. 39 EPC would apply.

Arts. 49/50 CPC concerning the surrender and lapse of patents would apply to European patents; however, the lapse would take effect in each Contracting State separately.

Centralized procedures for limitation and revocation of European patents would take place as provided in Arts. 51 ff./55 ff. CPC.

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<sup>74</sup>Charting a course, No. 98.

<sup>75</sup>Common Appeal Court.

The regulations governing languages in the Community Patent Convention would be reviewed and a cheaper solution devised.

The relationship of the new protocol to EC law and institutional arrangements would have to be legally clarified.<sup>76</sup>

According to the understanding of the strategy, this would be an alternative to apply in all the Contracting States, however, the possibility of making certain reservations could be considered.

29. The last part of the fourth strategy indicates, first, the need for revising Art. 53 (b) EPC, excluding inventions in plant and animal varieties, as well as essentially biological processes for the production of animals and plants from patent protection. The point is made that although the case law of the Boards of Appeal of the EPO has ensured the essential patentability of inventions in the field of **biotechnology**, in particular of genetic engineering and hence of genetically modified plants and animals as such, problems do exist in practice.<sup>77</sup> Due to the fact that the prohibition on double protection in the

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<sup>76</sup>Charting a course, No. 100.

<sup>77</sup>In this regard the statement given in “Charting a course” is no more valid. In its “Plant Cells/Plant Genetic Systems” decision (of February 21, 1995, T356/93 - 3.3.4, 1995 OJ EPO 545) the Technical Board of Appeal explicitly denied claims related to, e.g. transgenic plants as covering also plant varieties excluded from patent protection under Art. 53 (b). The headnote II of this decision reads:

“The concept of “plant varieties” under Art. 53 (b) first half-sentence EPC, refers to any plant grouping within a single botanical taxon of the lowest-known rank which is characterized by at least one single transmissible characteristic distinguishing it from other plant groupings and which is sufficiently homogeneous and stable in its relevant characteristics.”

Thus, plant biotechnologists who invent a generally applicable method for producing transgenic plants with new and valuable traits are left without any protection if they do not by chance own also the patent on a gene to be used in such a method. According to this decision any plant with a stably introduced foreign gene already constitutes a plant variety (contra Lange, Patentierungsverbot für Pflanzensorten, 1996 GRUR Int. 586-591). Note, such inventions are not eligible for protection under the UPOV scheme, i.e. they also cannot be protected under the Regulation on Community Plant Variety Rights. This type of protection is strictly limited to a single variety. It has also to be added that the President of the EPO tried in vain to bring about a decision of the Enlarged Board of Appeal on the issue whether a claim which relates to plants or animals but wherein specific plant or animal varieties are not individually claimed contravene the prohibition on patenting in Art. 53 (b) EPC if it embraces plant or animal varieties. Since pursuant to Art. 112 (1) (b) the President can refer a point of law to the Enlarged Board of Appeal only where two Boards of Appeal have given different decisions on that question, which according to the Enlarged Board did

UPOV Convention, the original cause for this exclusion, was removed in 1991 and the fact that Art. 53 (b) was adopted during a period in which genetic engineering susceptible of industrial application did not exist, this exclusion should be reconsidered. Exclusionary provisions of that type in a given region are a threat to a leading-edge industry such as biotechnology and in particular genetic engineering. It has also been stressed that problems exist in this area in view of the debate on the patentability of animals and plants under the aspect of Art. 53 (a) EPC. However, although the development and diffusion of inventions in biotechnology and the resulting products need to be subject to control by the public authorities, the starting point for such control should not be patent law.<sup>78</sup> Secondly, **protection for computer-related inventions** has been addressed and it has been declared that the European Patent Office will, within the legal limits set, have to develop a similarly liberal, sustainable practice as the US Patent and Trademark Office<sup>79</sup> for the grant of patents, for new artificial intelligence systems and neural networks in particular. Thirdly, the issue of minor forms of protection, i.e. of a possible **European utility model** was addressed. Here the EPO takes a hesitant position, expressing some doubts as to whether there is a genuine need for such a European form of protection, in view of the fact that until now the existing national systems are used almost exclusively (to about 90%) by applicants from the countries concerned. Moreover, concerns were expressed as to the complex interaction between European patents and the planned European utility models, especially if this new form of protection was used increasingly by non-European applicants.

## (vi) Reactions to the Designed Strategies

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not apply to the case, the question remained unanswered (Decision of the Enlarged Board of Appeal of November 27, 1995, G0003/95, 1996 OJ EPO 169 – “Inadmissible referral”).

<sup>78</sup>Charting a course, No. 101-103.

<sup>79</sup>Charting a course, No. 105.

30. On 11-12 September 1995 in Munich a Hearing '95 was held at the European Patent Office on the strategies referred to above. Prior to reproducing the main outcome of the hearing on respective issues, as summarized by the Administrative Council of the EPO<sup>80</sup>, observations of one participant of that hearing should be quoted. Despite the obvious irony of his language, the statement does touch most of the problematic issues of the discussed strategies and of the present system under the EPC. It reads as follows:

“To sit through the resulting hearings and listen to the cacophony of conflicting opinions from the “interests”, whilst flanked by the massed ranks of the Administrative Council - apparently instructed to remain silent listeners - was in itself a vivid demonstration of what a curious animal the European Patent Organisation is. Of course, it is a camel (put together by a committee), but more importantly for the present discussions, it is a camel which many people are trying to modify genetically and one suspects that the modifications will either result in an even greater camel, or its disappearance altogether.”<sup>81</sup>

Despite the language, this spectator's observation indicates that inherent problems may exist in the EPC construction, concerning the interrelationship between its different organs. It indicates that there are reasons for dissatisfaction with the present situation, and it indicates that he is still waiting for promising and truly convincing solutions for the future.

31. The summaries provided by the Administrative Council itself, although in a completely different language, more or less affirm this observation and should be reproduced as far as of particular importance in the context of this paper. They read as follows:

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<sup>80</sup>HEARING/PV1 of 20.12.1995.

<sup>81</sup>Lees, Patent World, December 1995/January 1996, p. 24.

All speakers are in favour of a dualistic system of national offices and EPO. The importance of well-functioning national offices is stressed as being essential, especially for the SMEs. The national offices are seen as the starting point for the granting procedure and, in the case of many SMEs only wanting to protect for a local market, also as the final point. Synergy effects should be explored to the maximum extent, but must not go so far as to endanger the existence of national offices.

The Community patent in its present form is considered too costly and to contain legal uncertainties and will therefore not be used by industry.<sup>82</sup> Patent attorneys should be given the possibility to act before COPAC. The equivalent of COPAC should be introduced for patents granted under the EPC.

A majority of those addressing the subject of a European utility model was against the concept, but a minority considers this a useful tool for SMEs. Those against the European solution would, however, like to see harmonization of the national utility systems.

There is general concern about the fees charged by the EPO and the participants encouraged measures to be taken to reduce costs, although such measures must not negatively affect the quality of the granting procedure. There is a lack of understanding why fees have not been reduced, although the financial situation of the EPO would permit this.

The representatives of the patent profession are in favour of maintaining the present translation requirements. The reasons for this position are

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<sup>82</sup>Note that representatives of the Union of European Industries (UNICE) were positive of the concept of the Community patent as such. But they expressed the view that in its present form the Community patent is not only too costly but also puts patent rights for the whole EU at risk. The patent rights were endangered by complex formalities and the granted patent must be maintained in all Member States to avoid that rights are lost on implied consent. UNICE expressly favored the creation of a central litigation system for the European bundle patent. Therefore, for the EPC the equivalent of COPAC, the so-called EPAC should be created (*ibidem*, p. 5).

based on the right for third parties to read the patent specification in their own language, to be able to recognize possible infringements and to use the documentation for technical development. These aspects are especially important for the SMEs. The patent profession also highlights the risk of a geographical imbalance of representation if the translation is abolished. The representatives of industry, also those representing the SMEs, are equally in favour of a change to the present requirements as a means to reduce costs. They stress that for technical development the patent application, not the granted patent, is important. SMEs normally cannot understand the patent specification, even in their own language, and will always need the advice of the profession if an opposition is to be filed or if an infringement occurs. **They favour a solution with a high-quality translated abstract and translation of the claims, preferably funded by the EU.**<sup>83</sup>

## **IV. The Involvement of the European Union in Patent Law**

### **(i) Regulation on a Supplementary Protection Certificate**

1. Strictly speaking, the only legal action of the Community in the narrower field of patent law, which until now successfully resulted in a Council Regulation is that concerning the creation of a supplementary protection certificate for medicinal products of June 18, 1992.<sup>84</sup> This Regulation has provided for an extension of the term of patent protection for medicinal products for a maximum of five years in order to compensate the loss in time of effective patent protection due to the time needed for obtaining the first authorization to place the product on the market in the Community. The

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<sup>83</sup>Emphasis added.

<sup>84</sup>Council Regulation (EEC) No. 1768/92, OJ EC of 2.7.92 No. L 182/1.

preparatory work on the Regulation on a Supplementary Medical Certificate in turn led to the first and as yet only revision of the EPC when on December 17, 1991 an Act Revising Art. 63 was adopted.<sup>85</sup> As is well known the only change which made a revision necessary resulted in the freedom of the Contracting States to extend the term of a European patent under the same conditions as those applying to its national patents. Thus, an obligation of all the EU Member States based on the Regulation required a “quasi authorization” for applying the new rule to European patents.

## **(ii) Proposal for a Directive on the Legal Protection of Biotechnological Inventions**

2. Another legislative initiative of the Community was launched by the Commission in 1988 when a Proposal for a Directive on the Legal Protection of Biotechnological Inventions was submitted to the Council.<sup>86</sup> It is well known that on March 1, 1995 the European Parliament for the first time under the co-decision procedure rejected the Common Proposal of the European Parliament and the Council of Ministers for this Directive, primarily because under the proposal patents on isolated human genes and human gene therapy, under certain circumstances even germ line therapy, were in principle allowed.<sup>87</sup> It should be recalled that the clear aim of that Directive was to introduce throughout the Member States protection standards comparable to those applied in the United States and in Japan. In both these countries specific exclusionary provisions as to biotechnological inventions

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<sup>85</sup>1992 OJ EPO 1. On January 24, 1994 the Commission submitted also a proposal for a Supplementary Agrochemical Certificate (Doc. COM (94) 579 final - CUD 94/0285), which was eventually adopted on July 23, 1996 (Council Regulation No. 1610/96, OJ EC of 8.8.96 No. L 198/30).

<sup>86</sup>First proposed in Doc. COM (88) 196 final - SYN 159, October 17, 1988, OJ EC No. C of 13.1.1989, p. 3.

<sup>87</sup>See on the rejection of the European Parliament, Rothley, Why Parliament Must Think Again About Biotechnological Protection, European Brief, March /April 1995, 60 et seq.; Gallochat, A Vote in Favor of America, European Brief, March/April 1995, 61 et seq.; Straus, Wrong Decision for the Wrong Reasons, European Brief, March/April 1995, 63.

do not exist. In the United States, it has been clarified for years that not only biological material such as microorganisms, plasmids, viruses etc., but also animals and plants as well as animal and plant varieties are eligible subject matters for patent protection.<sup>88</sup>

3. By 1988 the biotechnology case law of the EPO only started to emerge and further developments were hardly predictable. The same was true for the practice of the national patent offices and courts.<sup>89</sup> In order to cover all issues which seemed important for future developments, the proposal originally addressed the patentability of living matter in general, provided for an interpretation for the exclusionary provisions of national patent laws corresponding to Art. 53 (a) and (b) EPC in order to accommodate the needs of plant and animal biotechnologists, defined the scope of patent protection in a way that paid tribute to the self-reproducibility of living matter, and provided for an improved situation of the applicants regarding the deposit and release of biological material. Since the original proposal has entirely relied on national patent law provisions of the EU Member States corresponding to Art. 53 (a) EPC with respect to issues of ethics and morals, it met with strong opposition from the European Parliament, right from the outset.

4. Although in the course of the tedious negotiations between the Commission and the Council on the one hand, and the European Parliament on the other, numerous amendments in this respect were introduced in the proposal, the Common Position finally - at least allegedly - stumbled over the issue of ethics and morals linked to the patenting of human genes and human

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<sup>88</sup>Cf. Adler, Can Patents Coexist with Breeders' Rights? Developments in U.S. and International Biotechnology Law, 17 IIC 195-227 (1986); Markey, Patentability of Animals in the United States, 20 IIC 372 et seq. (1989); see also contributions in Lesser (ed.), Animal Patents, The Legal, Economic and Social Issues, New York 1989.

<sup>89</sup>For the situation prevailing in Europe by 1985, see Beier, Crespi & Straus, Biotechnology and Patent Protection - An International Review, OECD Paris 1985.

germ line therapy.<sup>90</sup> Although the opinions on the advantages and disadvantages of that proposal were split to a certain extent, there was one undisputed advantage to be seen in the clear statement of Art. 3, declaring as patentable “biological material, including plants and animals, as well as parts of plants and animals, except plant and animal varieties”. Since the issue of ethics and morals of patents in human genes was the main cause for the failure of the initiative, here it should only be recalled that in Art. 2 (3) (a) (b) of the proposed Directive, the following was explicitly declared unpatentable: the human body or parts of the human body as such (a) and processes for modifying the genetic identity of the human body contrary to the dignity of man (b), under the aspect that the exploitation of such inventions would, under all circumstances, be contrary to *ordre public* or morality. An important clarification of what had to be understood under the notion of a “human body and its parts as such”, was offered in Recital 10, which clarified that genes, proteins or cells in the **natural state** in the human body were unpatentable *eo ipso* under Art. 2 (3) (a), but not if they were isolated from the human body. The human origin alone was not sufficient ground for exclusion. Thus, in the case of patent applications related to isolated genes, the general rule of Art. 2 (3), i.e. the rule which corresponded to Art. 53 (a) EPC, was declared applicable. In other words, even if the exploitation of an isolated gene were prohibited by law or regulation in some or all of the Member States, this would not automatically render the invention at stake unpatentable. Only if the law prohibiting the exploitation formed part of the *ordre public*, meaning part of the “major principles of the legal order,” would this be the case.

5. Contrary to the patentability of isolated full-length DNA sequences for which the inventor can indicate a function, for instance the expression of a specific protein, isolated human nucleic acids having no described application other than the expected properties attributable to any such

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<sup>90</sup>See for details Roberts, The Former Biotech Patent Directive - Council Common Position 4/94: Directive on the Legal Protection of Biotechnological Inventions, Patent World, May 1995, 27 et seq. at 31; Straus, 26 IIC 942 et seq. (1995).

nucleic acids, i.e. ESTs, should be unpatentable according to Recital No. 11 of the defeated proposal. In consequence, the Directive would have solved the problem arising from the present definition of “industrial applicability” under Art. 57 EPC, which differs to a considerable extent from the “utility” requirement of US patent law.

6. It was also important that, despite the fact that the proposal did not touch upon the exclusion of plants and animal varieties along the lines of Art. 53 (b) EPC in the national laws of the Member States, it took account of the serious problems faced by biotechnologists working in the field of plants and animals, i.e. the self-reproducibility of the propagating material. Under such circumstances a process patent does not offer an adequate scope of protection if it is limited only to products of the first generation obtained by such a patented process. Virtually nobody will repeat the process but will rather use the propagating material, i.e. seeds, buds, buddings, cuttings etc. Therefore, it was, first clarified that the scope of protection of a process for the production of living matter or other matter containing genetic information permitting its multiplication in identical or differentiated form, does not only extend to the product initially obtained by the patented process but also to the identical or differentiated products of the first or subsequent generations obtained therefrom, such products being deemed also directly obtained by the patented process. Moreover, the proposal clarified that such products were to be protected as direct products of a process even though they would be an animal or a plant variety, which as such were excluded from patent protection.

7. In December 1995, for the time being, the last attempt for a European Parliament and Council Directive (EC) on the legal protection of biotechnological inventions was launched.<sup>91</sup> This last proposal deviates from the previous ones in some important aspects. The following are to be mentioned only: Under Art. 9 (1) the basic rule of Art. 53 (a) EPC is first

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<sup>91</sup>Doc. COM 661 13.1.295.

repeated, by declaring that inventions shall be considered unpatentable where exploitation would be contrary to public policy or morality, provided that the exploitation is not deemed to be so contrary merely because it is prohibited by law or regulation. In paragraph 2 (a) of that Article methods of human treatment involving germ line gene therapy are explicitly declared unpatentable. Moreover, Recital No. 21 stipulates that the question whether applications for a certain invention offend public policy or morality must be determined in each specific case by means of an appraisal of values involved, whereby the benefit to be derived from the invention, is weighed and evaluated against any risk associated therewith, and against any objections based on fundamental principles of law. Here the Commission took up ideas developed in the case law of the EPO. The Technical Board of Appeal in the so-called Harvard-onco-mouse case declared that under Art. 53 (a) EPC an instruction has to be seen that a test has to be performed on a case-by-case basis, whereby a careful weighing up of the suffering of animals and possible risks to the environment on the one hand, and the invention's usefulness to mankind on the other, has to take place.<sup>92</sup> Thus, notwithstanding the provision of Art. 1 (2) of the proposal stating that this Directive shall be without prejudice to national and Community laws on the monitoring of the applications of research and of the commercialization of its results, under Recital No. 21 the question whether or not a patent will be granted could well depend on considerations detached from existing national and Community laws.<sup>93</sup> In view of the clear wording of Art. 27 (2) TRIPS, which has binding effects for the Community, as well as for the Member States, an exclusion from patentability under aspects of public order or morality is subject to two restrictions: It may only be established if the commercial exploitation of the banned inventions is prevented in the

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<sup>92</sup>Decision of April 3, 1992, 24 IIC 103 et seq. (1993) - "Onco-mouse/Harvard II". Cf. also Gugerell, Patenting of Human Genes and Living Organisms - The Current Practice of the European Patent Office, in Vogel & Grunwald (eds.), Patenting Human Genes and Living Organisms, Berlin etc. 1994, p. 106 et seq.

<sup>93</sup>See for criticism of the respective EPO case law Straus, 26 IIC 926 et seq. (1995) with further references.

respective country **and** such prevention is necessary to protect, for instance, human, animal or plant life or to avoid serious prejudice to the environment.<sup>94</sup> Thus, a test weighing-up interests involved as addressed in Recital No. 21 would be only in conformity with TRIPS if the commercialization of the respective invention was not permitted in the Member States.

8. As regards the issue of patentability of isolated human genes, which was hotly disputed in the European Parliament and which is indeed decisive for securing the necessary huge investments into research and development of new drugs based on genetic information contained in the genes,<sup>95</sup> Art. 3 of the new proposal seems to offer an adequate solution: On the one hand, the human body and its elements in their natural state are not considered patentable inventions, on the other hand, an invention capable of industrial application which relates to an element isolated from the human body or otherwise produced by means of a technical process can be patented, “even if the structure of that element is identical to that of a natural element” (Art. 3 (2)). Thus, DNA sequences representing the full-length of a gene, isolated from the human body, are eligible for patent protection, if a teaching is given by the applicant as to how to produce them at will, and for what purposes they can be used.

9. Having regard to the latest state of the EPO case law under Art. 53 (b) EPC, i.e. after the “Plant Cells/Plant Genetic Systems” decision of the Technical Board of Appeal,<sup>96</sup> it has to be observed that the new proposal does not provide for any improvement of the situation of plant and animal biotechnologists. It expressly reconfirms the exclusions existing under both Art. 53 (b) EPC and the parallel national laws of the Member States, without solving the now obviously existing but unsolved problem of the interface

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<sup>94</sup>Cf. Correa, *The GATT Agreement on Trade-Related Aspects of Intellectual Property Rights: New Standards for Patent Protection*, (1994) *EIPR* 327 et seq., at 328; Straus, 26 *IIC* 949 et seq. (1995).

<sup>95</sup>See more on the importance of genes for medicine and pharmaceuticals Straus, 26 *IIC*, 922 et seq. (1995).

<sup>96</sup>See *supra* footnote 77.

between patents and breeders' rights.<sup>97</sup> It does not offer any protection for generic inventions *in* transgenic animals and plants, as long as the case law remains free to interpret the notion of a "variety" under Art. 53 (b) EPC in a way as to include any animal or plant in which a foreign gene, responsible, for instance, for insecticide-, pesticide-, herbicide-resistance but also for higher yields, improved stress or drought tolerance, has been stably introduced. Moreover, the redrafted Art. 10 (2) last sentence makes it impossible to efficiently protect methods used for the production of transgenic animals and plants, since the protection of the process which should usually cover biological material directly obtained by such a method "shall not affect the exclusion from patentability of plant and animal varieties as such provided for in Art. 4 (2)." This situation seems to be extremely deplorable especially in view of the fact that until now in this area Europe was more or less able to keep up pace with the United States and even more so with Japan. In the latter countries inventors are not faced with any obstacles of that kind.

### **(iii) Green Paper on the Protection of Utility Models in the Internal Market**

10. In July 1995 the Commission presented its Green Paper on the Protection of Utility Models.<sup>98</sup> A number of questions concerning desirability and specific requirements of the so-called minor form of industrial property protection for lesser inventions at the Community level were put to the public for discussion. Although 12 out of 15 Member States have national utility model laws, and two further are about to introduce this type of protection, as yet no harmonization at Community level has taken place in this area of law.

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<sup>97</sup>See on that Crespi, Patents and Plant Breeders' Rights: Is there an Interface Problem?, 23 IIC 168 et seq. (1992); Teschemacher, Die Schnittstelle zwischen Patent- und Sortenschutzrecht nach der Revision des UPOV-Übereinkommens von 1991, in: Bruchhausen/Hefermehl/Hommelhoff/Messer (eds.), Festschrift Rudolf Nirk zum 70. Geburtstag, Munich 1992, p. 1005 et seq., at 1010; Straus, Pflanzenpatente und Sortenschutz - Friedliche Koexistenz, 1993 GRUR 794 et seq., at 796.

<sup>98</sup>Doc. COM (95) 370 final.

11. At present the prospects of this initiative of the Commission are difficult to predict. The reaction of the interested circles seems to be divided.<sup>99</sup> The discussion on the issue of utility models at an international level is maybe best demonstrated by developments within the International Association for the Protection of Industrial Property (AIPPI). AIPPI was not able to achieve agreement or to adopt resolution at their Executive Committee Meeting in Copenhagen in 1994, and neither at the Congress of Montreal in 1995. All the AIPPI Members could agree upon was to study the issue further.<sup>100</sup>

#### **(iv) Regulation on the Application of Article 85 (3) of the Treaty of Rome to Certain Categories of Technology Transfer Agreements**

12. On January 31, 1996 the Commission Regulation (EC) No. 240/96 on the Application of Art. 85 (3) of the Treaty of Rome to Certain Categories of Technology Transfer Agreements<sup>101</sup> was adopted. Although this piece of EU legislation does not directly relate to the European patent system, it has to be mentioned here because it is aimed at facilitating the dissemination of technology and at improving the manufacturing processes,<sup>102</sup> on the one hand, and, on the other hand, it should apply not only to patents of the Member States' but also to Community patents and European patents.<sup>103</sup> In the context of this paper the importance of Regulation No. 240/96 is to be seen primarily in its taking into account of the justified interests of the owners of patented technologies to exploit those technologies contractually according to their technological and economic needs and capabilities. Thus, for instance, Art. 85 (1) of the Treaty

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<sup>99</sup>See supra no. 40.

<sup>100</sup>Cf. AIPPI Annuaire 1995/VIII, p. 140-147.

<sup>101</sup>OJ EC of 9.2.96 No. L31/2.

<sup>102</sup>Recital No. 8.

<sup>103</sup>Recital No. 4.

is not applicable to such obligations of the licensor as to refrain from licensing other undertakings to exploit the licenced technology in the licenced territory or to exploit it himself in that territory,<sup>104</sup> or to the obligation of the licensee not to exploit the licenced technology in the territory of the licensor within the common market, or not to manufacture or use the licenced product, or put that product on the market, or use the licenced process in territories within the common market which are licenced to other licensees.<sup>105</sup> This will leave manoeuvring space to owners of Community patents to tune their exploitation within the Common Market to their legitimate interests.

## V. International Developments

13. Patent protection at an international level has been truly revolutionized by the conclusion and entering into force of the TRIPS Agreement. The period of frustrating endeavours to introduce improvements into the Paris Convention for the Protection of Industrial Property of 1883, as revised, as to substance, for the last time in Lisbon in 1956,<sup>106</sup> ended in 1994 quite surprisingly.

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<sup>104</sup>Art. 1 No. 1, 2.

<sup>105</sup>Art. 1 No. 3, 4, 6.

<sup>106</sup>The Paris Convention Revision of 1969 did not bring about substantial changes at all and even more so in the field of patents. See Beier, *One Hundred Years of International Cooperation - The Role of the Paris Convention in the Past, Present and Future*, 15 IIC 1-20 (1984); Straus, *Implications of the TRIPS Agreement in the Field of Patent Law*, in: Beier and Schriker (eds.), *From GATT to TRIPS - The Agreement on Trade-Related Aspects of Intellectual Property Rights*, Weinheim 1996, pp. 160 et seq. at 170 et seq.

Although the Community actively participated in the preparatory process, from the very beginning the United States was the initiator and the driving force behind the GATT enterprise. The success of TRIPS, however, has to be seen in a wider context, linked to the ever-increasing interdependence among participants in the world markets due to the globalization of research, production and, above all, trade. Under such circumstances every participant who endeavours to secure export markets for his products, on the same footing with local traders and producers, cannot continue to disregard intellectual property created by nationals of countries of those markets by claiming the territoriality of intellectual property rights and his sovereign right to regulate those rights according to his needs. Thus Primo Braga has correctly described the developments which finally led to TRIPS as follows:

“The relevant utilitarian calculus that a developing country faces has, however, been significantly altered by the ‘marriage of convenience’ between trade law and IPR’s in developed economies. The possibility of trade retaliation for piracy provides a strong, additional incentive for outward-oriented countries to reform their IPR systems. At the same time, it creates a new challenge for the GATT system.”<sup>107</sup>

14. The success of TRIPS, which for the first time in the history of patent law means a world-wide harmonization of protection standards, such as protection requirements, duration of protection, effects of protection and their possible limitations, etc. is mentioned here in this way only because its realisation became possible only after decisive political and economic changes in dealing with intellectual property rights, and only because the global interdependence of participants in world market reached a level which did not allow separate and isolated actions. Because these special links were not present in negotiations for the conclusion of a Treaty Supplementing the Paris Convention as far as Patents are Concerned (PLT), all efforts of the

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<sup>107</sup>Primo Braga, North-South Debate on Intellectual Property Rights, in: Smith, Global Rivalry and Intellectual Property - Developing Canadian Strategies, Halifax 1991, pp. 173 et seq., at 177.

World Intellectual Property Rights Organisation to successfully end its PLT endeavours have failed. It is clear now that for the time being and also for the foreseeable future there will be no further endeavours as regards patent law harmonization at an international level.<sup>108</sup>

15. It should suffice here to note that not only developing countries will have to adjust their national patent laws to the new standards, but that this was equally true for the main player in the game, the United States of America.<sup>109</sup> The main change necessary was that allowing applicants to establish the date of invention by reference to knowledge or use thereof, of the activity with respect thereto, not only in the US or a NAFTA Country but also in a WTO Member. This places Community nationals on the same footing with US nationals in the so-called interference proceedings, but has also the consequence that elements of the first-to-invent system alien to European patent law will penetrate Europe.<sup>110</sup> Moreover, the United States had to adjust the duration of its patents to the TRIPS standards. However, the United States of America also used the opportunity of revising its patent law so as to introduce in Sec. 111 a new type of so-called "Provisional Patent Application" for the establishment of a national priority system. Under this provision US scientists and inventors can secure their national and international priority just by depositing for instance a manuscript of a lecture with the US PTO together with a payment of 150 US \$. Thus, the disadvantage that the 12

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<sup>108</sup>See for details Straus, op. cit., footnote 106, with further references.

<sup>109</sup>It has to be noted here that Japan also had to adjust its patent law to some extent to the TRIPS requirements. By the Law No. 116 of December 14, 1994, *inter alia* the following changes have been introduced: the patent term has been changed from 15 years counted from the publication of the examined application (KOUKOKU) to 20 years from the initial filing date; English text filing has been introduced; disclosure requirements have been relaxed (all these changes entered into force on July 1, 1995); and a Post-Grant Opposition System has been adopted and has become effective as of January 1, 1996 (see for more details Fujimura, Changing Patent Prosecution Practice in Japan, AIPPI Journal of the Japanese National Group, November 1995, pp. 302-314; and also Motsenbocker, Adapting to the New Japanese Patent Examination System, AIPPI Journal of the Japanese National Group, September 1995, pp. 223-231).

<sup>110</sup>See, for instance, Love, Do Not Ignore US Research Record Keeping Principles - Reforms to US Patent Law As a Result of TRIPS Make It Essential that Foreign Applicants Keep Full and Accurate Records of the Invention Process, Managing Intellectual Property, July/August 1995, p. 22 et seq.

months grace period of the US patent law has had for inventors seeking protection abroad will be reduced to a minimum and in fact transformed into a quasi-international grace period.<sup>111</sup> The described change in US patent law was clearly intended to support scientist inventors who play an ever-increasing role in the US economy<sup>112</sup> in their endeavours to secure patent rights abroad.<sup>113</sup> Nothing similar could be observed on the part of Community lawmakers<sup>114</sup>. In Europe, until now the issue of a grace period was

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<sup>111</sup>Note that after initial hesitations the view seems to prevail that provisional applications will be accepted as regular national filing under Art. 4 Paris Convention. See PCT Newsletter No. 12/95, p. 4; and the Notice from the President of the European Patent Office of January 26, 1996, 1996 OJ EPO 1. According to this Notice since the provisional application meets in substantive terms the requirements that the right of priority under the EPC places on a duly filed national applications which establish priority and because the subsequent fate of this filing is immaterial, the EPO recognizes the provisional application for patent as giving rise to a right of priority within the meaning of Art. 87 (1) EPC.

<sup>112</sup>The USA already in the eighties enacted several laws aimed at encouraging technology transfer of results from federally funded research undertaken at universities and academic research institutions: in 1980 the Bayh-Dole Act (Public Law 96-517) introduced the possibility for private parties to retain patent rights via a "title in contractor" policy, i.e. small businesses and non-profit Organisations, including universities were allowed to retain intellectual property rights to results from federally funded research. Also in 1980 the Stevenson-Wydler Act (Public Law 96-480) required that federal agencies administrating research establish an Office of Research and Technology Applications (ORTA) at all government-operated or contractor-operated laboratories with an annual budget of more than US \$ 20 million. In 1986 the Federal Technology Transfer Act (FTTA; Public Law 99-502) amended the Stevenson-Wydler Act by shifting the emphasis in federal policy from one permitting technology transfer to one requiring that agencies act vigorously in working with industry to commercialize federally funded research. In the so-called Cooperative Research and Development Agreements (CRADAs) also exclusive licensing terms were allowed (see for details of operation of CRADAs at National Institutes of Health (NIH) and Department of Energy (DOE): Office of Technology Assessment of the Congress of the United States, Federal Technology Transfer and the Human Genome Project, Washington, D.C., 1995, pp. 12 et seq.). As demonstrated by the bill on the Federal Technology Commercialization and Enhancement Act, introduced by Representative Kanjorski in January 1995, in the USA legislative efforts to improve technology transfer continue. The latter bill *inter alia* proposes the establishment of a single information source for all patents, licences, technologies and processes owned by the government in order to make more readily accessible to the general public, particularly to businesses and entrepreneurs in the United States the results of federally funded research (see the report by Rea/Woessner, Biotechnology & Chemical Practice (Joint Meeting), AIPLA Bulletin, March-April 1995, pp. 314 et seq., at 315 et seq.

<sup>113</sup>In the field of genetic engineering academic inventors held 18.1% of all patents in 1992 (see Rosenberg and Nelson, American Universities and Technical Advance in Industry, 23 Research Policy 323-348, Table on p. 339 (1994)). It is most remarkable that the US researchers rank the promotion of US economic competitiveness abroad in second place as their expectations of the effectiveness of technology transfer, for instance for molecular biological and biomedical research (with 65% after 79% for promoting public health and helping cure disease; see Office of Technology Assessment, op. cit., footnote 112, Table 3-1 at p. 26).

<sup>114</sup>Despite the clear and extensive objectives of the Community in the area of research and technological development as laid down in Title XV (Artt. 130 f - 130 p) EC Treaty, the respective legislative actions of the EU remained limited to some very basic rules for the dissemination of the

considered exclusively as part of a package deal with the US, i.e. grace period against first-to-file. It has never been seriously examined on its own merits in the context of the Community market representing 350 million inhabitants. Moreover, some anachronisms are to be observed in Europe: On the one hand, researchers at universities and other academic institutions are urged to take patents in order to enhance innovation, yet on the other hand, nobody feels really competent to take account of the specific needs of scientists. Their primary goal is the enrichment of knowledge and its publication. Hence, they are heavily dependent on early publication, also in order to secure scientific priority. Although an empirical study commissioned by the Commission of the European Communities in 1988 revealed that about 95% of the interviewed scientists were clearly in favour of a grace period, nothing has happened.<sup>115</sup>

16. If there was one point in which the United States could not fully succeed, then it was the patentability of inventions in animals and plants. The tandem

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research results from the specific programmes of research, technological development and demonstration of the European Community (Council Decision of 21 November 1994, 94/762/EC OJ EC 30.11.94 No. L 306/8). In this Decision only the ownership of the knowledge resulting from work under a shared cost contract in favour of the Contractors, including, where applicable, the Community is regulated (Art. 1 (a) second paragraph), and the obligation imposed to protect knowledge which could be used in an industrial or commercial application in any appropriate form to the extent required in the light of the interests of the Community and the Contractors and in accordance with any applicable legislation or convention (Art. 1 (b)). Thus, even in case of Community funded or co-funded research programmes no legal instruments aimed at protecting and exploiting of research results are provided, which could be compared with those existing under the US system.

<sup>115</sup>See Straus, *The Significance of the Novelty Grace Period for Non-Industrial Research in the Countries of the European Economic Community*, EUR 11271 EN, Luxembourg 1988, p. 27. The survey was performed in Denmark, Federal Republic of Germany, France, The Netherlands and United Kingdom. Clear statements in favour of a grace period preceding the international Paris Convention Priority have been expressed also by the alliance of the large scientific Organisations in Germany. On the other hand, the National Academy's Policy Advisory Group of the United Kingdom in March 1995 expressed some hesitations as to the grace period. If a grace period had to be introduced, then it should be limited in term to a few months at most. According to the views of this group, the best way of tackling the academic problem is undoubtedly to get efficient machinery in position for acquiring patents (see National Academy's Policy Advisory Group, *Intellectual Property & The Academic Community*, London 1995, at p. 20, no. 5.4). The situation of scientists inventors in Europe has aggravated since it has become clear also under the EPC that a subsequent publication of an invention for which a patent application had been filed forms part of the relevant, thus also the inventive step impeding or even destroying state of the art for an improvement invention of the same inventor for which a patent application was filed within the priority interval (see the decision of the Enlarged Board of Appeal of the EPO - G 03/93 of August 16, 1994, 26 IIC 540 (1995)). Cf. also Schwaab/Wegner, *Harmonization and Priority of Invention*, in: Straus (ed.), *op. cit.* footnote 5, pp. 159-169, with further references.

composed of developing countries and the European Union<sup>116</sup> succeeded eventually in transferring the essence of Arts. 52 (4), 53 (a) and (b) EPC into Art. 27 TRIPS. Thus, European problems in granting patents for inventions in the area of biotechnology have been also grafted into TRIPS. In view of the high priority biotechnology has as a research area according to the Commission's<sup>117</sup> White Paper, this might be viewed as a surprise. Since under Art. 27 (3) (b) TRIPS the allowable exclusion from patentability of plants and animals in general, which originally had to be viewed as being broader than exclusions under Art. 53 (b) EPC, but is probably not if the case law of the Technical Board of Appeal of EPO is upheld, will have to be reviewed four years after the date of entry into force of the WTO Agreement, there will be an opportunity to reconsider both the TRIPS rules and Art. 53 (b) EPC, an opportunity that the Community should use.

17. In the context of TRIPS it should be also added that under Art. 27 (1) in principle patents shall be available for any inventions, whether products or processes, **in all fields of technology**. Thus, the question may arise whether computer programs and other software inventions have to be patented in WTO Member States. The eventual answer to this question will depend to a considerable extent on the interpretation of the notion of "all fields of technology" and also on how effective the mandatory protection of computer programs as literary works under the Art. 10 TRIPS will be in WTO Members. Should it turn out that copyright protection is not sufficient, endeavours to get computer programs patented throughout the WTO will increase. At present in the patent granting practice of the United States there is a clear tendency to favour patenting of computer programs as such.<sup>118</sup> The EPO is trying to keep

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<sup>116</sup>See already the Guidelines and objectives proposed by the European Community for the negotiations on Trade -Related Aspect of Substantive Standards of Intellectual Property Rights of July 7, 1988 (MTN. GNG/NG 11/26/III, 3 (ii)).

<sup>117</sup>European Commission, Growth, Competitiveness, Employment - The Challenges and Ways Forward into the 21st Century, Brussels and Luxembourg 1994, p. 15.

<sup>118</sup>See Court of Appeal for the Federal Circuit (CAFC) in 31 USPQ 2 d 1545 - "Alappat", and as regards the follow-up developments Glaze & Kahn, Patenting Software in the United States, Managing Intellectual Property, February 1995, p. 19 et seq.; Ayers, Interpreting In Re Allapat With

pace, but is clearly limited by the wording of Art. 52\_(2) (c) and (3) EPC, which declares explicitly that computer programs as such shall not be regarded as patentable inventions.

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an Eye Towards Prosecution, 76 JPTOS 741 et seq. (1994); Bierce & Harrold, New US patent guidelines offer hope to software developers in era of diminishing copyright protection, 11 Computer Law & Practice 1995 No. 45, p. 94 et seq.; Arriola, Aktuelle Entwicklungen im Patentschutz von Computerprogrammen und mathematischen Algorithmen in den USA, 1996 GRUR Int. 9-19. On the parallel situation in Canada and also on possible impacts of the US practice see August, Canadian Patent Prosecution for Computer Software - Will Recent US Decisions Have an Impact?, Patent World June/July 1995, p. 32 et seq. The Japanese Patent Office also decided to follow the US example and to start granting patent protection for computer software stored in memory devices, including floppy disks and CD-ROMs (see the report "Japan Set To Issue Patents On Computer Software", Patents & Licensing, April 1996, p. 2).

## VI. Suggestions

Bearing in mind that an effective functioning of the internal market and the industry competitiveness of the Community in world markets are of highest political and economic priority, having also regard to the fact that patent protection constitutes an essential incentive for Community-wide innovation and improvement of the European economy's Community potential, which in the past has continually declined, and finally having regard to the unsuccessful attempts to establish a truly operational Community patent system, action at highest political EU level is suggested, which should comprise the following measures:

- (i) EPC and ACP (CPC) should be transferred to the Community legal order and be merged. At the same time the deficiencies of either instrument contradicting the genuine goals of the European Union should be remedied;
- (ii) Substantive patent law provisions relating to subject matter eligible for protection as well as to patentability requirements should be reviewed so as to meet the actual needs of European inventors and so as to be brought in line with patent law provisions of the main EU competitors in the world markets;
- (iii) The translation issue should be solved on the basis of the original concept of the CPC 1975, i.e. with mandatory translations of claims in one of the official languages of each of the Contracting States and the possibility for the Contracting States to require a translation of the specification of the Community patent in one of their official languages, however, only as a condition for the enforceability and not of the validity of the patent (see supra p. 17). No convincing arguments have been presented based on empirical data which would demonstrate that the

original concept of the CPC was wrong in this respect or untenable within the context of EU, or under the legal order of the Member Countries;

- (iv) In order to ease access to Community patents published in an official language of the EPO, that is not an official language of a respective Member State, before the patent has become enforceable due to the translation supplied by the patentee, means should be sought within the new system and its Rules relating to fees so as to financially contribute to costs of translations to be provided on demand of interested SMEs. Investigations should continue in exploring additional possibilities to make the essential content of European patent specifications available in languages of the EU Member States as well, however without burdening the patentee unduly and only to the extent necessary;
- (v) Efforts should be undertaken to make the ACP fully applicable as soon as possible also to European patents granted for EU Member States under the EPC scheme. Application of the ACP to European patents is the only way disparities existing under the present system could be remedied within tolerable time limits;
- (vi) The EPO as a Community institution<sup>119</sup> should coexist with national patent offices; Community patents should be exclusively administered by the European Patent Office; national patent offices should continue to grant national patents as the only alternative to the Community patent. National patent offices should also act as receiving offices for European patent applications; a solution which would allow an option

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<sup>119</sup>In view of the self-sustainable service function of the European Patent Office, the shift of the EPC under the Community legal order does not automatically imply the necessity to transform the European Patent Office into a “Full Scale” Community Institution with all legal consequences. The tasks of the EPO, including its international obligation to grant patents for non-EU Member States and patents which are extended even to non-contracting states under the relevant extension agreements, as well as its basic design of self-financing without making profits, would suggest a legal form along the lines of the design provided for the European Investment Bank under the Rome Treaty.

between a “classical European patent” and a Community patent does not appear adequate, if the costs of the system are acceptable;

- (vii) EPO and national patent offices should form part of a communication network using all high-speed communication technologies, such as electronic access to information, electronic mail, electronic images etc., which will be available in the Community by the year 2000, according to its White Paper;
- (viii) In the context of the communication network, national patent offices should use all the information stored at the European Patent Office in order to provide both legal, and technical information services. Duplication of work should be avoided; wherever possible and adequate, EPO and national patent offices should take advantage of services offered, as well as of human resources available to either party;
- (ix) Regulations on fees will have to take into account that a European Community patent is granted for a single market and administered by a single patent office; the amounts of the respective fees will have to be commensurate;
- (x) In respect of official fees, SMEs should be offered a treatment similar to that provided under the US patent law, i.e. a 50% reduction for Small Entities;
- (xi) Aimed at securing harmonized interpretation of the EPC and CPC throughout the EU and throughout all judicial instances, the concept of the “Community Patent Courts” of first instance under the Protocol on Litigation should be reexamined and efforts undertaken to construe this court as a central “Community Patent Court” of first instance, having branches in all or some Member States. The composition of said court should be European, i.e. constituted of judges from several Member

- States.<sup>120</sup> Legal means should also be sought in order to ensure an expeditious procedure through all instances under the Litigation Protocol;
- (xii) The Boards of Appeal of the European Patent Office should be merged into the COPAC, which would become also a kind of EPAC scheme; patent attorneys should be admitted, too;
  - (xiii) Legislative measures should be adopted to enhance technology transfer especially of publicly funded research results at universities and other academic institutions in the EU; care should be taken of the fact that maintaining, enforcing and defending industrial property rights, especially patents, is a costly exercise, which as a rule cannot effectively be borne by those institutions alone; in addition, the fact that it is in the genuine economic interest of the Community that research results from European academic institutions be protected optimally and exploited, may not be disregarded;
  - (xiv) Legislative and other measures should be adopted aimed at strengthening Europe-wide awareness of the merits of patents and their use and at enabling access to the relevant legal and technical information collected by the European Patent Office and national patent offices via communication networks;
  - (xv) Legal measures have to be sought and adopted to establish harmonized and attractive tax treatment throughout the EU, applicable to the use of industrial property rights, in particular in respect of amortization or immediate deductibility of the expenses related to the intellectual property rights, to the tax treatment of the royalties, to the limitations

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<sup>120</sup>Under this suggestion “branches” of the Central “Community Patent Court” of First Instance, are not to be necessarily understood as permanent institutions but could be conceived as circuit courts, composed always of at least one member whose nationality would be of the state in which the Court would meet, hence, as a rule, the state of the residence of the defendant.

with respect to transfer pricing and with respect to the defence of industrial property rights.