Inventor

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Abstract:

Patent law has a profound effect on the status of inventors. Patents grant their right holders with a bundle of rights which fundamentally shape the status of inventors. EU law has had lesser impact on patent law compared to other fields of intellectual property (IP). There are no unitary patent rights within the EU as in trade marks and designs but the Unitary Patent Package (UPP) launched in 2012 aims at creating so-called patents with unitary effect and the creation of a Unified Patent court. Areas where EU law has had effect on the status of inventors are limited to issues, such as biotechnological inventions, the enforcement of patent rights and the creation of supplementary protection measures. In addition, the EU has recently been active in the field of trade secrets which has ramifications for inventors.

1. Introduction

Patent rights constitute the most important regulatory measure affecting the status of inventors. Inventors are entitled to the grant of the patent on their invention after registration[1] providing their holders with significant economic rights.[2] National patent laws of EU Member States have historically regulated and shaped the status of the inventor to a large extent. Some form of harmonisation of the substantial national patent laws within EU member states has been achieved outside the EU's framework by the European Patent Convention (EPC). The EU's influence on patent law has been limited when compared to trade mark and design law[3] to certain areas of patent law, such as that in relation to biotechnological inventions. Eventually, the UPP which is currently being implemented may increase the EU's involvement in the field of patents.

2. The European patent system

Patent law within EU member states which regulates the status of inventors, such as questions of inventor ship and employee inventions are still largely based on national law. However, some form of convergence of national patent laws occurred outside the EU framework. The most important measure is the EPC which is an intergovernmental treaty and as such open to non –EU Member states.[4] It created the European Patent Office (EPO) which

provides inventors with the possibility to receive a bundle of national patents with a single application. The UPP may eventually provide for patent rights under the EU framework.

2.1 Evolution of the European patent system

The European patent system can be traced back to initiatives in the late 1940ies.[5] The Council of Europe spearheaded these early attempts of harmonisation with the "Longchambon plan" which foresaw the creation of a European patent office granting European Certificates of Inventions. This plan can be regarded as the blueprint of the EPC of 1973[6] whose aim was to enable industry to secure patent protection across national boundaries, hence reducing cost. The EPC system uses a central granting office applying common rules on patentability. Once granted, the patent holder would enjoy protection in EPC states designated in the application.[7] The enforcement of such patents would be subject to the applicable national law.[8] The relevance of the EPC for harmonising patent law in Europe is increased since its substantive provisions on patentability have been applied in many national patent laws of EPC states. As to the harmonising efforts of the EU and its predecessors: Several attempts to provide for unitary patent rights. The first version of a Community Patent Convention 1975 (CPC1975), however, never came into force due to the failure of some countries to ratify it.[9] Later attempts to revive the project, such as the CPC 1989,[10] also failed.

2.2 The Patent with unitary effect

The current European patent framework has apparent deficiencies due to parallel litigation to enforce EPO bundle patents in multiple jurisdictions which increases costs and the possibility of national courts diverging in their findings of infringement of identical patents granted by the EPO.[11] The CPC 1975 aimed at addressing this but would have not resolved the issue of adjudicating EPO patents designating non-EU states. The European Patent Litigation Agreement (EPLA) elaborated under the auspices of the EPO would have allowed the participation of non-EU states and was favoured by many patent practitioners due to the court system it proposed.[12] Its adoption was, however, not possible since EU member states would not have the competence to conclude such an agreement.[13] In order to eliminate the deadlock caused largely due to the language regime of prospective patents of the EU,[14] the Council of the EU authorized enhanced cooperation with respect to the creation of unitary patent protection which resulted in the UPP.[15] Spain and Italy initially sued against the decision to apply enhanced collaboration but the CJEU dismissed the case.[16]

The UPP includes 3 legislative measures: 2 EU Regulations (one creating the patent with unitary effect[17] and another on the translation regime[18]) and one international agreement between the participating Member States on a centralized court system (UPC Agreement).[19] Patents with unitary effect would be granted by the EPO.[20] The court system entails a court of first instance with national- , regional- and a central division(s) and would oversee litigation over the validity and infringement of patents with unitary effect and of national European Patents of such EU Member States that are part of the UPP. Oddly, the substantive provisions on patent infringement and exceptions thereof have been placed within the Agreement on the court system[21] and not within the Regulation where they initially were placed. This was aimed to curtail the CJEU's influence on substantial patent law and is most probably based on the scepticism of some EU member states and practitioners towards the role of the CJEU[22] on the highly technical subject matter of patent law. The full implementation of the Unitary Patent Package is currently stalled since the necessary ratifications of the UPC Agreement are lacking.[23] Brexit[24] and a Constitutional complaint before the German Federal Constitutional Court currently stall the ratification of the UP Agreement and the implementation of the UPP.[25]

3. EU law regarding patents

3.1 Biotech Directive

The Biotech Directive[26] is presently the only legislative measure by the EU that covers substantive patent law. It covers areas, such as patentability, the scope of protection of biotechnological patents, excluded subject matter and cross-licensing which makes it important for the status of inventors. It aims at resolving the divergent approaches towards the patenting of biotechnology to assist this field of technology.[27] The Directive's substantive provisions were adopted within the EPC framework[28] in order to avoid discrepancies between the law of the EPC and that of EU Member States. The Directive is particularly relevant to the status of inventors as it enabled the patenting of genetic material by declaring biological material as being a patentable invention where the material is isolated from its natural environment or produced by means of a technical process even if it previously occurred in nature.[29]

The morality exclusions within Article 6 of the Directive produced the most controversial case law of the CJEU in the field of patents. The patent in suit in the *Brüstle* case[30] involved isolated and purified neural precursor cells produced from human embryonic stem cells (HECSs) for treating damaged organs. The patent was challenged based on the provisions which declared uses of human embryos for industrial or commercial purposes as unpatentable. The

referring court sought the CJEU's clarification, *inter alia*, on what constitutes an "embryo". The CJEU provided a broad interpretation of the term embryo which would include "any human ovum after fertilisation." In addition, non-fertilised human ova "into which the cell nucleus from a mature human cell" were transplanted or such stimulated by parthenogenesis would be considered as embryos. The decision was criticised[31] for its wide implications for stem cell research in Europe, its autonomous interpretation creating a fictional consensus of what is considered an embryo and its questionable conformity with the TRIPS Agreement.[32] In a later decision, the CJEU appears to have narrowed its approach with regards to non-fertilized ova.[33] But the question remained whether the CJEU, as a generalist court with the primary function of safeguarding the interpretation and application of EU law[34], would be a suitable forum for adjudicating highly technical patent disputes.[35]

3.2 Supplementary protection measures

The EU's first field of activity related to the term of protection for patents.[36] The patent term of 20 years was deemed to be insufficient for products requiring regulatory approval, particularly pharmaceutical products. Before being placed on the market, medicinal and plant protection products require either national or EU marketing authorisation. In order to compensate for the delays that may occur, the European legislator provided 2 Regulations[37] which created supplementary protection certificates (SPCs) for medicinal and plant protection products. The recitals of the Regulations state that both product groups warrant "favourable rules" which would provide for sufficient protection to encourage research in Europe.[38] Rather than extending the term of patents, the European legislator created a *sui generis* system distinct from patents in order to avoid a conflict with the maximum term of a patent of 20 years as stipulated in Article 63 EPC.[39] SPCs take effect at the end of the term for the patent and can extend the effect of the basic patent for up to five years.[40]

3.3 Enforcement directive

Another field where EU law affected the status of the inventor is the enforcement of patents. The Enforcement Directive, which was adopted in 2004, had the aim to target counterfeiting and piracy, in particular actions on a large scale, industrial level.[41] To address this, the internal market logic was applied again: Recital 9 of the Directive states that the different frameworks of IP enforcement would "lead to a weakening of the substantive law on intellectual property and to a fragmentation of the internal market in this field." The Directive requires EU Member States to provide for certain enforcement measures, such as measures for preserving evidence, precautionary measures, injunctive relief and damages.

4. Trade Secrets

Finally, a related field of law to patents influencing the statues of inventors are trade secrets. Inventions are often valuable information which some inventors keep secret rather than seek patent registration. Commercially valuable trade secrets are an important asset of many firms and the protection of trade secrets plays "an important role in protecting the returns to innovation."[42] In order to overcome the diverging approaches of trade secret protection within EU member states, the EU has recently adopted the Trade Secrets Directive in 2016.[43] The Directive does not specify the role of inventors but defines the holder of a trade secret as a legal or natural person having control over the trade secret.[44] This definition does not provide clarification as to the position of the inventor as the "creator," e.g. whether he or she will be a joint holder of such information of the trade secret. This arguably remains to be determined by national laws; hence the direct impact of the Directive on the status of inventors is limited.

5. Conclusion

The EU has had limited direct effect on the status of inventors since national patent laws already forged the status of inventors to a large extent before the European legislator sought to regulate within this field. Where the EU legislator acted, the legislative changes were generally aimed at expanding the scope of protection, enhancing enforcement measures, extending the rights or supplementing them in form of trade secrets. These measures were based on the goal to eliminate distortions within the internal market. This overarching goal may have led to some commentators to criticise the value of the CJEU in the highly technical field of patents. In addition, the EU legislator is aiming at further harmonising patent law within the Union. This task has to resolve the complex issue of integrating the current European patent landscape. These activities directly affect the inventor who is also the right holder of the patent. But even where this is not the case, patent law and its legal reflex affect the status of inventors indirectly by aiming to promote innovative activities.

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[1] i.e. Article 60 (1) EPC.
[2] In addition, some jurisdictions provide inventor with protection through utility models or petty patents.
[3] Bently L, Sherman B (2014) Intellectual Property Law, 4th. Oxford University Press, Oxford, p 389
[4] Though all EU member states are Contracting states of the EPC. Switzerland, Norway and Turkey are, for instance, contracting states of the EPC.
[5] Wadlow C (2010) Strasbourg, the Forgotten Patent Convention, and the Origins of the European Patent Jurisdiction IIC 123: 143.
[6] Arnold R (2013) An Overview of European Harmonization Measures in Intellectual Property Law. In: Ohly A, Pila J (eds) The Europeanization of Intellectual Property Law, Oxford University Press, Oxford, p 26.
[7] See Articles 64(1), 79 EPC.

[8] Subsection (3) of Article 65 states *expressis verbis* that "[a]ny infringement of a European patent shall be dealt with by national law." However, an opposition proceeding however may be launched after the grant of the patent before the EPO.
[9] Krieger A (1988) The Luxembourg Convention on the Community Patent - A Challenge and a Duty, 143: 145-146. However, the substantive provisions of the Community Patent Convention with regards to post-grant phase of patents, such as the rules on infringement were adopted in many national patent laws of EU member states.
[10] This was an amended version of the CPC 1975 and was envisaged as an international agreement and was signed on 15.12 1989 again in Luxembourg, 1989 89/695/EEC, OJ EEC L 401, 30.12.1989, 1–27. Similarly to the CPC 1975 this Agreement failed to enter into force.
[11] The prime example for this are the so-called "Epilady" cases -see: Fisher M (1007) Fundamentals of Patent Law - Interpretation and Scope of Protection, Hart Publishing, Oxford, pp. 246
[12] EPLA foresaw "the establishment of a highly specialized, semi-centralized European Patent Court having exclusive jurisdiction over litigation concerning the revocation and the infringement of the European bundle patent" – Ullrich H (2012) Harmonizing Patent Law: The Untameable Patent Union, Max Planck Institute for Intellectual Property and Competition Law, p 53. Available at SSRN. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2027920. Accessed 12 Mar 2018.
[13] Ellyne E (2014) European unitary patent: are we there yet? Queen Mary Journal of Intellectual Property 57: 60.
[14] A consensus was established to generally apply the three official languages of the EPO – English, French and German.
[15] Council Decision 2011/167/EU of 10 March 2011 authorising enhanced cooperation in the area of the creation of unitary patent protection (OJ 2011 L 76, p. 53)
[16] Joined Cases C-274/11 and C–295/11Spain and Italy v Council. Italy eventually ratified the Agreement on the Unified Patent Court.
[17] Regulation (EU) No 1257/2012 of the European Parliament and of the Council of 17 December 2012 implementing enhanced cooperation in the area of the creation of unitary patent protection (UP Regulation)
[18] Council Regulation (EU) No 1260/2012 of 17 December 2012 implementing enhanced cooperation in the area of the creation of unitary patent protection with regard to the applicable translation arrangements.
[19] Agreement on a Unified Patent Court, <https://www.unified-patent-court.org/sites/default/files/upc-agreement.pdf.>
[20] UP Regulation, Recital 5.
[21] Erika Ellyne, (supra FN 13) p 64-65.
[22] Jochen Pagenberg (2012) Die EU-Patentrechtsreform – zurück auf Los?) GRUR 582: 587.
[23] Article 89 UPC Agreement.
[24] McDonagh L, Mimler M (2017) Intellectual Property Law and Brexit: A Retreat or a Reaffirmation of Jurisdiction? In Dougan M (ed) The Uk after Brexit – Legal and Policy Challenges. Intersentia, Cambridge p 176
[25] Kluwer Patent Blog (2017) German complaint against Unified Patent Court Agreement: deadline for submitting views is end of October. http://patentblog.kluweriplaw.com/2017/09/12/german-complaint-unified-patent-court-agreement-deadline-submitting-views-end-october/. Accessed 15. Jan 2018
[26] Directive 98/44/EC for Biotechnological Inventions (1998)
[27] European Commission (1988) A European Patent Law for Biotechnology. http://europa.eu/rapid/press-release_P-88-111_en.htm. Accessed 15 Jan 2018.
[28] Administrative Council Decision, OJ EPO 7/1999, pp 437–440
[29] Article 3(2) Biotech Directive.
[30] *Oliver Brüstle v Greenpeace eV* (C-34/10) [2012] 1 C.M.L.R. 41.
[31] Bonadio E (2012) Stem Cells Industry and Beyond: What Is the Aftermath of Brüstle? European Journal of Risk Regulation pp 93.
[32] Nordberg A, Minssen T (2016) A Ray of Hope for European Stem Cell Patents or Out of the Smog into the Fog? An Analysis of Recent European Case Law and How It Compares to the US. IIC 138: 144.
[33] Case C-364/13 *International Stem Cell Corporation v. Comptroller General of Patents*
[34] Article 19(1) TEU.
[35] Pagenberg J (supra FN 22) p 587
[36] Bently L, Sherman B (supra FN 3) p 389
[37] Regulation (EC) No 469/2009 of the European Parliament and of the Council of 6 May 2009 concerning the supplementary protection certificate for medicinal products and Regulation (EC) No 1610/96 of the European Parliament and of the Council of 23 July 1996 concerning the creation of a supplementary protection certificate for plant protection products
[38] Regulation (EC) No 469/2009, Recital 3; Regulation (EC) No 1610/96, Recital 3.
[39] Article 63 EPC was subsequently amended in order to take account of SPCs.
[40] Regulation (EC) No 469/2009, Article 13; Regulation (EC) No 1610/96, Article 13.

[41] Massa C-H, Strowel A (2004) The scope of the proposed IP Enforcement Directive: torn between the desire to harmonise remedies and the need to combat piracy. EIPR 244: 244.
[42] Baker and Mackenzie (2013) Study on Trade Secrets and Confidential Business Information in the Internal Market. MARKT/2010/20/D, p 2. http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32016L0943&from=EN . Accessed 15 Jan 2018.
[43] Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure (Trade Secrets Directive).
[44] Article 2(2) Trade Secrets Directive