UNIVERSITY of LIMERICK

OLLSCOIL LUIMNIGH

College of Humanities

School of Law

Final Year Project

Infringing Patent Monopoly

A comparative assessment of American and European approaches to patent infringement litigation, with Ireland being a case study state.

Krzysztof Podkonski

0758612

LL.B in Law and European Studies

UNIVERSITY of LIMERICK

OLLSCOIL LUIMNIGH

Name:	**Krzysztof Podkonski**
Student I.D. Number:	**0758612**

Title of the project:	**Infringing Patent Monopoly** A comparative assessment of American and European approaches to patent infringement litigation, with Ireland being a case study state.
Internal Supervisor:	**Sinead Eaton**
Degree Title:	**LL.B in Law and European Studies**
Date:	**28th January 2011**

Infringing Patent Monopoly

A comparative assessment of American and European approaches to patent infringement litigation, with Ireland being a case study state.

Correction sheet

Declaration

This project is solely the work of the author and is submitted in fulfilment of the requirements of the Final Year Project for the Bachelor of Laws in Law and European Studies.

_____

Krzysztof Podkonski
28th January 2011

Acknowledgement

I would like to extend a special thank you to my supervisor, Sinead Eaton for her invaluable feedback and assistance in the writing of this project.

Abstract

This project looks at American and European approaches to the infringement of patent rights from the comparative perspective. During the course of the work, it will be demonstrated how each system has dealt with balancing clashing interests of inventors and third parties, and how real is the protection offered to both groups. The two approaches will not only be compared but more importantly any shortcomings in both jurisdictions pointed out to the reader, at the same time recommending possible way forward towards a more streamlined patent system. Moreover, this work will show what lessons can be learned from the American and European point of view, and whether this learning experience can produce any ready solutions to internal problems. Given the complex and burdensome nature of patent infringement litigation, the creation of a perfect regime is highly unlikely. However, both jurisdictions might learn from their experiences and incorporate certain features characteristic of their counterpart.

Contents

Table of cases

Table of Statutes

Ireland

United Kingdom

United States of America

European legislation

International legislation

Table of Statutory Instruments

Ireland

United States of America

European statutory instruments

Table of Constitutional Articles

1937

Introduction

The importance of patents in the modern global world should not be underestimated. A state's 'knowledge economy' is based on production and dissemination of technological data.[1] Thus, it is necessary for an efficient patent system to balance the incentives to create with innovative development of already patented inventions, to ensure that hi-tech improvements do not become suppressed. It has to be remembered that while a monopolistic exploitation of patent rights inspires efficiency and creativity to make the biggest possible profit, without pressure from the relevant product market, pioneers tend to sit back instead of pursuing an active strategy of perfecting their breakthrough inventions.[2] This work focuses on conducting a comparative assessment of American and European approaches to patent infringement to see how each system has balanced the conflicting interests of inventors and third parties, and how real is the protection offered to both groups.

From the onset, the complex and burdensome nature of patent infringement litigation has to be highlighted. This combined with the lack of ad-hoc institutions established to tackle internal idiosyncrasies have left the courts grappling with often contradictory rules of patent law. It is in the general interest of the society that any hurdles to the creation of a well-structured and highly incentivised patent system be overcome. In addition, the absence of a unified patent system in Europe has affected the clarity of law, something that if not resolved by the harmonisation process, might discourage future innovations.

In the course of this work, the two approaches will not only be compared but more importantly any shortcomings in both jurisdictions pointed out to the reader, at the same time

[1] Yvonne A Tamayo, 'Patents absurd: expanded State immunity in the global knowledge market' (2001) 6 VA JL & Tech 1, 1.
[2] Kenneth J Arrow, 'Economic welfare and the allocation of resources for invention' in Richard Nelson (ed), *The rate and direction of inventive activity: economic and social factors* (Cambridge 1962) 619-20.

recommending possible way forward towards a more streamlined patent system. Moreover, lessons to be learned from the American and European point of view will be examined, and whether this learning experience can produce any ready solutions to internal problems considered.

As this work is limited in its scope, the major focus will be on the infringement of inventor's rights put in the comparative context between America and Europe, with Ireland being used as a case study state. Such analysis will entail detailed examination of criteria to be met before an infringement action can be brought. This will be supplemented by an overview of the scope of awarded protection, determination of which takes a centre stage when it comes to establishing whether a particular breach has occurred and deciding on the type and extent of legal redress most suitable to the scenario at hand.

Chapter 1 An overview of law

1.1 Introduction

In order to gain a full grasp and understanding of underlying themes with regard to the patent protection, one must analyse the law in force first. This involves taking a closer look at a mixture of statue and case law that have developed over the years, thus, reflecting changes in trends and perception of the importance of patented inventions to the current commercial activities.

1.2 The law in force

In the US, patent laws are regulated under the Consolidated United States Code Title 35 (*hereinafter referred to as USC*) supplemented by the Consolidated Patent Rules enshrined in Title 37 of the Code of Federal Regulations (*USC Rules*). Of considerable importance are Part II and Part III of the former.[3] The latter further elaborates on the construction of specification, which serves as a written detailed description of the invention.[4] Its correct interpretation weighs heavily on defining the scope of patent claims that flesh out the subject matter of a given discovery for which the protection is sought. In other words, the claims set the boundaries along which the right to exclude others from the use of a patented invention operates.[5]

On the European part, the focus of this work will rest on the European Patent Convention (as amended) 1973 – 2000 (*EPC*) which established a "system of law for the grant of patents for inventions among the Contracting States".[6] As Muir correctly observed, its origin is rooted in the terms of Art 19 of the Paris Convention (as amended) 1883 – 1967 and Art 45 of the

[3] Patentability of inventions and grant of patents, and Patents and protection of patent rights respectively.
[4] 37 USC Rules §1.71 – 1.79.
[5] Kelly C Mullally, 'Patent Hermeneutics: form and substance in claim construction' (2007) 59 FLA L REV 333, 349.
[6] European Patent Convention 1973 art 1 (*EPC*).

Patent Co-Operation Treaty (as amended) 1970-2001 (*PCT*).[7] The first mentioned allows member countries of the Union[8] further the existing protection of industrial property through the enactment of special accords, as long as they remain in agreement with the main Treaty. While the PCT is concerned with the grant of regional patents under a so-called regional patent treaty, the EPC being an example of it. Thus, a patentee who elects not to pursue an international application may opt for less procedural and more applicant-friendly path provided at both European and regional level. Similar to the US system, the EPC is accompanied by the Implementing Regulations 1973-2006. As Nelson noted, with whom one must agree, while the regulations might seem analogous to those published in the Manual of Patent Examining Procedure in America they, nonetheless, appear less burdensome.[9] The fact that can be justified by the insertion of Art(s) 64 and 74 into the EPC that give the Convention its flexible character, achieved through the creation of a loosely connected bundle of domestic patents granted in different Contracting States. Art 64 provides that the extent of protection conferred by the European patent shall correspond with the rights normally awarded by a national patent authorised in each of the designated states.[10] By analogy, in the case of an alleged infringement any such claim shall be dealt with by domestic laws.[11] In the same vein, provisions of Art 74 state that any application for the European patent shall be subject to national laws relating to the grant of a patent. Thus, a potential patentee is at liberty to seek exclusive proprietary rights to his invention in countries with a lenient patent law, since the EPC does not harmonise the patent granting procedure in its Contracting States.

---

[7] Ian Muir, *European patent law: law and procedure under the EPC and PCT* (2nd edn, Oxford University Press 2002) 55.
[8] Not to be confused with the European Union. The one mentioned in the text refers to the Union of States created by the Paris Convention.
[9] Jon Nelson, *International patent treaties with commentary* (Oceana 2007) 355.
[10] EPC art 64(1).
[11] EPC art 64(3).

1.3 American and European patent systems compared

The American legal system heavily relies on federal pre-emption that cancels out often-conflicting state and federal legal instruments.[12] Having said that, the scope of such supreme authority is limited in itself and obeys the boundaries set out in the Constitution, therefore, giving a considerable law-making freedom to each state.[13] Nonetheless, its operation allows for the creation of a unified patent regime in the US. To contrast it with the European Union, an attempt to provide for such unitary effect in the Community would be seen as a serious encroachment on the internal sovereignty of its members. Thus, not surprisingly, the Agreement relating to community patents, incorporating the Community Patent Convention (as amended) 1975-1989 (*CPC*) has never entered into force but remained the valid, however, supplementing rather than supranational source of the national law applicable to the patent granting procedure in the EU states.[14] As Vandebeek aptly pointed out, this resentment can be explained by strong national sentiment on one hand and on the other by unwillingness to surrender territorial monopolies.[15] This type of behaviour gives rise to the fundamental discrepancies between removing all remaining barriers to trade, as envisaged by the European Economic Community Treaty, and possible infringement of EC competition laws through restricting competitiveness and transparency.[16]

Although the EPC enjoys a wider application and has a greater pool of contracting states, including non-EU members, than the CPC, it does not pursue the object of creating a unified European patent regime. Instead of approximating territorial laws, it opts for a safer option of

---

[12] William Burnham, *Introduction to the law and legal system of the United States* (4th edn, Thomson West, 2006) 41.
[13] Pruneyard Shopping Center v Robins (1980) 447 US 74 (USSC).
[14] Gerry Carroll et al, 'Patents' in Mark Hyland (ed), *Technology and IP law: professional practice guide* (Tottel 2008).
[15] Victor Vandebeek, 'Realizing the European Community Common Market by unifying intellectual property law: deadline 1992' (1990) BYU L Rev Vol 1990 Issue 4, ch 3.
[16] Ibid.

granting a string of national patents regulated by each designated state individually. This flexibility and voluntary membership gave it an unrivalled advantage and made it a far more successful initiative than the CPC. In addition, not forming part of European Community law, undoubtedly, adds to commercial attractiveness amongst inventors. Having said that, it may cause certain difficulties and create various obstacles getting in the way of legal clarity. Parkes rightly highlighted the lack of supranational tribunal, which would interpret the Convention and rule on any doubtful questions as far as the application is concerned.[17] Therefore, a need to develop a system characterised by the unitary approach is nothing short of being apparent.

As it has already been stated, Art(s) 64 and 74 are imperative to the operation of this patent system. While the EPC gives a structured legal framework to this regime, it is the national IP law that makes it operational. Therefore, to demonstrate the infringement procedure under the EPC, Ireland has been chosen as a case study state. The enactment of the Patents Act 1992 and its subsequent amendments (*PA*),[18] as Parkes reflected, have brought Ireland in line with modern European patent law and revisited a long-stalled practice.[19] Chapters VI and VII are of relevance to this work. The former covers a range of issues from the extent of protection and rights conferred by a patent to listing their limitations that can be raised by the accused party as part of his line of defence in an alleged infringement action. Even though litigation with regard to the European patent remains within a sole discretion of the Irish Courts, they must take cognisance of the Protocol on the Interpretation of Article 69 EPC (*Protocol*) that lays down the guidelines for determining patent claims, the scope of which decides how far the protection goes. Chapter VII of the Irish act focuses on the actual infringement,

[17] Andrew JA Parkes, 'The new patent regime' in Paul Coughlan (ed), *European initiatives in intellectual property: papers from the I.C.E.L. conference, November 1992* (Irish Centre for European Law, TCD 1993) 19. The European Court of Justice has no jurisdiction to adjudicate in matters related to the working of the EPC.
[18] Most recently in 2006 by virtue of Patents (Amendment) Act 2006.
[19] Parkes (n 17) 11.

scrupulously regulating actions for breach, up to the stage when damages are awarded. In addition, it prescribes available defences.

1.4 Conclusion

Summarising, the European patent system established under the EPC, in contrast to its equivalent in America, lacks a unitary character that is compromised for the doubtful benefit of the inventor who is allowed to designate a state or group of states in which an authorised patent will enjoy the legal protection granted under the auspices of the domestic law. This right to selection might negatively influence the spirit of free competition, as enshrined in the concept of the Internal Market, through the attainment of territorial monopolies. Moreover, it has led to fostering legal uncertainty. This is aptly illustrated by the *Epilady* case,[20] which concerned a device for removing hair from the skin. Opposite judgements were reached in the alleged infringement proceedings in Germany and England, only to have the patent revoked in the Opposition proceedings by the Board of Appeals of the European Patent Office. The presence of domestic piecemeal legal instruments modelled on various international IP conventions is somehow cumbersome, lengthy and dense. The supranational tribunal is needed to answer any doubts with regard to the interpretation of the EPC. In order to achieve this goal, a territorial approximation of patent laws must occur. This would not only consolidate the current rules in a coherent manner but also add to transparency and streamline the patent granting procedure. Either reviving the CPC common approach model at EU level or amending the EPC to bring it in line with the USC is highly recommended. However, both of the aforementioned initiatives, while holding a valid argument from the point of view of law, require the co-operation of all the European states, most likely rendering it impossible to

[20] Improver Corporation v Remington Consumer Product Ltd [1990] FSR 181 (PC).

materialise due to conflicting political as well as economic interests which Europe is entangled in.

Chapter 2 The extent of protection

2.1 Introduction

Determination of a breach of patentee's rights closely links in with construing the claims of a patent that are "the metes and bounds of the invention".[21] One should not underestimate the importance of this stage in the patent granting procedure. Without their proper construction, a potential infringer would benefit from using a patented process/product free of charge and not incurring any liability. In order to bar others from unlawfully exploiting one's licensed invention, the courts must be given evidentiary basis upon which the limitation of the protection can be established. These are derived from the specification and drawings submitted by the applicant during the examination of application phase. Notwithstanding the ease with which such construction can be enforced at first glance, there has been an on-going debate in the US over the suitability of current interpretative cannons. A clear need to consolidate methods in force and introduce a universal construction pattern has been voiced by various scholars and law practitioners in both jurisdictions. This daunting task of marking out the scope of protection was pertinently illustrated by Golden as the most contentious and challenging. [22]

2.2 Interpretative cannons in the US

There are two competing methodologies being applied in approaching the relationship between the claims and the specification by the Federal Circuit (*Court*), enjoying exclusive appellate jurisdiction in disputes over patents. The legislation itself gives a limited direction in this regard[23], therefore it falls to the courts to determine the patent construction guidelines.

---

[21] Standard Mfg Co v United States (1991) 25 Cl Ct 1 (USSC) 63 (Horn J).

[22] John M Golden, 'Construing patent claims according to their "interpretive community": a call for an attorney-plus-artisan perspective' (2008) Harv JOLT Vol 21 No 2, 322.

[23] 35 USC 112 re: Specification reads that the specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable

In *Alloc, Inc v Int'l Trade Commission* Rader J, while delivering opinion for the Court, ruled that patent claims must be construed in light of the specification.[24] Such reasoning was strongly objected by Harmer as running against the rudimental principle of patent law that prohibits the import of claim limitations from the specification that, in consequence, inherently restricts the scope of protection sought by the applicant. He proposed that the specification as a whole should be interpreted before any limitations can be validly incorporated.[25] According to Mullally, this has left the judges grappling with competing approaches, the fact, which had regularly affected the clarity of law.[26] Therefore, a potential applicant finds himself in a double trap. A surplus disclosure will inherently limit the scope of the patent claims, while too narrow description of the specification might result in an invention being invalidated on grounds of non-disclosure of information material to patentability under §1.56 of the USC Rules. The aggrieved individual can challenge the decision of the Office, as long as the omission was not a fraudulent one or made in bad faith and intentionally. However, any such legal action would further delay the granting of a patent, what might expose the patentee to financial losses he would not have incurred if the alleged infringement had not been raised and the license had been granted in a timely fashion. In the worst-case scenario, the invention might become commercially redundant during the proceedings.

2.2.1 The extrinsic vs. intrinsic approach

The Court is being torn between the extrinsic and intrinsic approaches. The justification for the prevalence of the latter can be found in the judgement of Michel J in *Vitonics Corp v*

---

any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

[24] Alloc, Inc v Int'l Trade Commission (2005) 342 F3d 1361 (Fed Cir) 1370.

[25] Rob Harmer, 'Construing patent claims in light of the specification versus importing claim limitations from the specification: is there any difference?' (2010) AIPJ Vol 4 Issue 1, 121-2.

[26] Mullally (n 5) 343.

Conceptronic, Inc.[27] As the claim construction is a matter of law, words should be given its ordinary or customary meaning. Amongst the sources utilised for guidance, he listed the patent specification, file history and, if in evidence, the prosecution history that is the complete record of all the proceeding before the Office. He then went on to state:

> *Such intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language.*[28]

Extrinsic evidence may include dictionaries, expert or inventor testimony, and prior art in the form of technical treaties and existing patents. They should be looked to when an analysis of the intrinsic evidence cannot resolve ambiguity in a disputed claim. This was extended in *Pall Corp v Micron Separations, Inc,*[29] where the Court added that such evidence might also be considered if needed to assist in determining the meaning or scope of technical terms in the claims. The judgement was subsequently cited with approval by Michel J in *Vitonics*, what seems at odds with his previous reasoning where he gave preference to intrinsic evidence. Sanders rightly described the extrinsic method as "procedural, hypertextualist and formalistic".[30] This premise appeared to have been supported by Linn J in *Texas Digital Systems,* where he stated:

> *(...) the terms used in the claims bear a heavy presumption that they mean what they say and have the ordinary meaning that would be attributed to those words by persons skilled in the relevant art.*[31]

In addition, a court will give a claim term the full range of its ordinary meaning as understood by a given artisan.[32] In the landmark decision of *Phillips v AWH Corp,*[33] while Bryson J

---

[27] (1996) 90 F3d 1576 (Fed Cir).
[28] Ibid 1582 (Michel J).
[29] (1995) 66 F3d 1211 (Fed Cir) 1216.
[30] Michael Sanders, 'A survey of post-Philips claim construction cases' (2007) 22 Berkley Tech LJ 215, 218-21.
[31] Texas Digital Systems, Inc v Telegenix, Inc (2002) 308 F3d 1193 (Fed Cir) 1202 (Linn J).
[32] Rexnord Corp v. Laitram Corp (2001) 274 F3d 1336 (Fed Cir) 1342.
[33] (2005) 415 F3d 1303 (Fed Cir) 1312-3.

highlighted the significance of the specification as the single best guide, he failed to dismiss the extrinsic method as redundant altogether for interpretative purposes. Thus, as Harmer aptly commented, unintentionally confusing the minds of the judges as to which of the two conflicting cannons should apply.[34] Though remarking that the extrinsic approach cannot produce a reliable interpretation, he left if to the Court, acting in its discretion, to admit such evidence as long as they are considered in the context of the intrinsic interpretation.[35] In the aftermath of *Philips*, the courts have stressed the need to consider the specification in its entirety and import any existing limitations selectively rather than automatically. A holistic standard for interpreting the claims is now firmly established, where all intrinsic evidence is to be consulted by looking to the intention of the inventor at the time of drafting. However, it has to be born in mind that it is for the judge and not juries nor patentee or their legal representatives to determine the state of mind of the inventor.[36] Nonetheless, greater judicial activism or statutory intervention would be welcomed in resolving the methodological conflict for the sake of the predictability of patent law. As Burke and Baker correctly argued, such clear and coherent system in place would encourage innovation together with the disclosure to the public through the provision of legally ascertained rewards and incentives.[37] The most viable solution is that of the attorney-plus-artisan perspective proposed by Golden.[38] The genesis of it is that the extrinsic-driven approach is dismissed and the claims are implied from the perspective of a patent attorney who besides legal expertise[39] has access to technical knowledge of a skilled person in the relevant art, remaining the first port of consultation in

[34] Harmer (n 25) 137-8.
[35] Philips (n 33) 1313 (Bryson J).
[36] Markman v Westview Instruments Inc (1996) 517 US 370 (USSC).
[37] Thomas P Burke, 'Software patent protection: debugging the current system' (1994) 69 Notre Dame L Rev 1115, 1119; Ted Baker, 'Pioneers in technology: a proposed system for classifying and rewarding extraordinary inventions' (2003) 45 ARIZ L Rev 445, 461.
[38] Golden (n 22) 322, 383.
[39] Ibid; An artisan lacks the interpretative capacity to capture claims in a legal sense, rendering his interpretation too personal.

case of conflicting evidence. This hybrid perspective combined with the proposed abolition of the principle of non-transfer of claim limitations from the specification[40] would ensure that the patent claim interpretation process remains fixed in technological reality.

2.3 A European approach to claim interpretation

Similar to the US position, the EPC offers little guidance in determining the extent of protection conferred by a European patent, where its claims are to be construed by reference to the description and drawings.[41] Article 69 EPC coupled with the Protocol of the Convention are to direct the courts in their endeavours at interpreting the relevant terms of a European patent application. Their intention was to enable the judiciary strike the right balance between English strict and German liberal interpretation, thus, giving a fair protection for the patentee, at the same time providing the third parties with a reasonable degree of uniformity in the interpretation of patents in the different Contracting States. As Singer correctly observed, this practice intended to reach a compromise between two interpretative extremes.[42] The above legal instruments have been implemented into the Irish law by virtue of s 45 PA 1992 and the Second Schedule thereto.[43] The correct approach adopted in Ireland is one of a purposive construction laid down in *Catnic*.[44] In the course of his judgement in the High Court, Justice McGovern[45] citied with approval a passage from Lord Diplock, who said:

> *The patent specification should be given a purposive construction rather than a purely literal one derived from applying to it the kind of meticulous verbal analysis in which lawyers are too often tempted by their trainee to indulge. The question in each case is: whether persons with practical knowledge and experience of the kind of work in which the invention was intended to be used, would understand that strict compliance with a particular descriptive word or phrase appearing in a claim was intended by the patentee*

[40] Harmer (n 25) 153-4; as long as such limitation is rooted in intrinsic evidence.
[41] EPC art 69.
[42] Romuald Singer, *The European patent convention: a commentary* (first published 1989, Sweet & Maxwell 1995) 253. On one hand, preventing a broad interpretation of narrowly formulated claims by national courts. On the other, avoiding a very narrow interpretation of claims confined to their precise wording only.
[43] S 45(3) states that the court shall have regard to the directions contained in the Protocol (...) and set out in the Second Schedule to this Act
[44] Catnic Components Ltd v Hill & Smith Ltd [1982] RPC 183 (HL).
[45] Novartis AG v The Controller of Patents, Designs and Trademarks [2007] IEHC 442 (HC).

> *to be an essential requirement of the invention so that any variant would fall outside the monopoly claimed, even though it could have no material effect upon the way the invention worked."*[46]

Aldous LJ in *Assidoman Multipack Ltd v Mead Corp*[47] noted that *Catnic* is still a good law consistent with the Protocol. The continuing value of the test was reinforced by the learned judge in a subsequent case of *Kastner v Rizla Ltd*.[48]

The content of the claims determines the scope of protection afforded by a European patent. In accordance with the Protocol, the interpretation of the patent terms is not to be confined to the exact wording but extend to modifications outside the literal text.[49] Unlike the US system, its European counterpart, as a matter of principle, looks to the invention as a whole from the onset,[50] thus, removing potential risk of conflicting interpretative cannons, the presence of which can add confusion to the examination process.[51] A person skilled in the relevant art must carry out a claim interpretation that is technologically sensible and logical.[52] By analogy, the description cannot contradict its actual content, even though linguistically the two may link together.[53] For the purpose of legal certainty, claims are to be given a broader meaning while being interpreted.[54] The description and drawings are to be used to confirm any relative, unclear or ambiguous patent terms where the scope of protection needs to be determined.[55] In several decisions, the Technical Board of Appeal (*Board*) have ruled that the patent claims are to be given its ordinary meaning as commonly accepted in the relevant art.[56]

---

[46] Catnic (n 44) 242-3.
[47] [1995] FSR 225 (PC).
[48] [1995] RPC 585 (CA).
[49] OJ EPO (1987) 554.
[50] EPO T 23/86, OJ EPO (1987) 316.
[51] In America, judges are inclined to consider individual claim limitations contained in the specification. This has led to an on-going debate over what analysis (extrinsic or intrinsic) should be applied to the determination of the extent of protection.
[52] EPO T 190/99; confirmed, *inter alia*, most recently in EPO T 1241/03.
[53] EPO T 380/01.
[54] EPO T 759/91 and T 522/91; here the EPO Technical Board of Appeal gave the word 'comprising' the broader meaning of 'include' or 'comprehend'.
[55] EPO T 50/90.
[56] EPO T 311/93 and T 1321/04. The patent document may be its own dictionary.

On its face, it might appear that the proposition of unified interpretation system in the Contracting States has been achieved. However, one must be mindful of the fact that the above mentioned principles apply exclusively to the identification of the subject matter. Assessment of the levels of protection is carried out by national courts not the EPO bodies, beyond the jurisdiction of which is the determination of an alleged infringement.[57] It is in accordance with domestic law, both procedural and substantive, that such breach of patentee's rights should be dealt with.[58] Therefore, it is imperative to analyse how the Irish courts have tackled the problem of claim interpretation. In the recent decision of *Ranbaxy Laboratories Ltd & Others v Warner Lambert Company*,[59] O'Sullivan J in the High Court hinted on the standards of patent construction applicable in this jurisdiction. In the course of his judgement, he referred to two English common law principles. Firstly, as we have seen in an American case of *Markman*, [60] construction is a question of law determined by the judge. Thus, direct or indirect evidence of what a patent means or any subsequent behaviour of the parties is rendered inadmissible for the purpose of the interpretation of claims. Secondly, only witnesses skilled in the art concerned can give evidence. Having said that, Aldous LJ in *Lubrizol v Esso Petroleum*[61] remarked that despite the fact that patent construction is reserved for the court, judges can be informed as to the common general knowledge; that is the meaning of technical language at the relevant time. O'Sullivan J, while citing with approval the judgement of Mummery J in *Glaverbel SA v British Coal Corporation*,[62] confirmed that expert testimony would not be admitted by the court for the purpose of the construction of the specification.[63] Thus, dismissing the use of extrinsic evidence, something that Bryson J in

[57] EPO T 409/90.
[58] EPC art 64(3).
[59] [2005] IEHC 178 (HC).
[60] Markman (n 36).
[61] [1998] RPC 727 (PC) 738.
[62] [1995] FSR 254 (CA).
[63] Ranbaxy (n 59).

Phillips[64] fell short of, leaving the interpretative cannons conflict unresolved in the US. It is for the judge only to construe the ambit of the claims. He may have due regard to the surrounding circumstances, as they existed at the date of the publication of the specification, aiding him in doing so. The above findings were upheld by the Supreme Court.[65]

2.4 The doctrine of equivalents

The European patent system has, however, been tainted by the confusion with regard to the applicability of the doctrine of equivalents.[66] In the words of Billings Learned Hand J, its purpose was:

> *(...) to temper unsparing logic and prevent an infringer from stealing the benefit of the invention.*[67]

This way the patent system, through its incentive structure, could become more attractive for the inventor. In America, the scope of protection extends to insubstantial alterations determined by the triple identity test laid down by the US Supreme Court in *Warner-Jenkinson Co v Hilton Davis Chem Co*.[68] For an alteration to be found insubstantial, the claim limitation in the alleged device or process must meet the following criteria:

a) it performs substantially the same function,

b) in substantially the same way,

c) to yield substantially the same result.[69]

---

[64] Phillips (n 33); extrinsic evidence can be used to shed the light on any ambiguity in the terms.
[65] [2005] IESC 81, [2006] 1 IR 193 (SC); Catnic Components Ltd v Hill & Smith Ltd [1982] RPC 183 (HL); Kirin-Amgen v Hoechst [2005] 1 All ER 667 (CA) followed.
[66] The doctrine of equivalents is a judicial creation that allows patentees to exclude others from the use of subject matter beyond the textual scope of patent claims, as long as the court is satisfied that the infringing device or process is equivalent to any element specified in the claims.
[67] Royal Typewriter Co v Remington Rand, Inc (1948) 168 F2d 691 (2d Cir) 692.
[68] (1997) 520 US 17 (USSC).
[69] Ibid 21.

However, the doctrine is considered as being in the decline. Petherbridge credits procedural context and stricter legal rules imposed by the courts for circumventing its application.[70] Nonetheless, there is a great deal of inconsistency in approaching the doctrine in different EPC Contracting States.[71] Ireland appears to subscribe to it. In *Farbwerke,*[72] Kenny J in the High Court held that the defendant had infringed the plaintiff's patent, despite the fact that the defendant had substituted the starting material specified in the patent claim for another material. The two were found to be chemically equivalent. Attempts have been made to harmonise the patent system,[73] most recently in the Protocol introduced by the EPC in 2000.[74] However, none of the efforts has produced any lasting uniformity at national level. As Farmer and Grund aptly pointed out, the lack of a definition of an 'equivalent' in the Protocol would hamper the harmonisation process.[75] As the infringement proceedings are likely to be instituted in many Contracting States at the same time, the absence of consolidated interpretation structure can lead, and have done so on several occasions,[76] to different opinions being reached by national courts; the factor weighing against the legal clarity and coherency of the European patent system.

2.5 Conclusion

Summing up this chapter, one must arrive at the conclusion that both systems are grappling with internal idiosyncrasies which need to be resolved in order to streamline their operation. In America, the courts must be more decisive in marking out the interpretation principles, ideally doing away with the extrinsic approach. Moreover, the proposed hybrid perspective

[70] Lee Petherbridge, 'On the decline of the doctrine of equivalents' (2010) Cardozo L Rev Vol 31 Issue 4, 1404.
[71] The doctrine can be invoked in France and Germany but has never been employed in the United Kingdom.
[72] Farbwerke Hoechst v Intercontinental Pharmaceuticals (Eire) Ltd [1968] FSR 187 (HC).
[73] CPC; COPAC; proposal for the establishment of a Community Patent Circuit Court.
[74] P(A)A 2006 added a new provision corresponding with the Protocol's section on 'equivalents' in the Second Schedule of PA 1992-2006.
[75] Stacey J. Farmer and Martin Grund, 'An overview of the new European Patent Convention and its potential impact on European patent practice' (2007) Bio-Science L Rev Vol 9 Issue 2, 55.
[76] See Epilady (n 20); Daily v Establissements Fernand Berchet [1992] FSR 533 (CA).

has yet to be subjected to judicial scrutiny to prove its workability in technological reality.[77] In Europe, the uniformity in the interpretation of the claims in the alleged infringement proceedings remains the most burning issue. While the doctrine of equivalents benefits the patentee with extended protection, inconsistency in its use and practice might discourage the disclosure of technology to the public. Only through concerted efforts of the Contracting States, the full harmonisation of national laws can be achieved. Sadly, as Fysh rightly observed, the common approach to patent litigation is still "light years away".[78]

[77] Text to Golden (n 38) in ch 2.2.1 for discussion.
[78] Michael Fysh, 'Scope of claims' (Open forum, Monte Carlo 1999) MC/1.2.

Chapter 3 Infringement

3.1 Introduction

In this chapter, we will look at types of infringing activity and criteria that must be met before patent infringement can be found. As the two systems are anchored in similar principles, I will depart from the previous pattern where the US and European approaches were analysed separately and will focus on laying down the general law, pointing out differences when necessary. As the Irish jurisdiction lacks well-established case law on the subject, for the sake of the clarity of my argument, English authorities will be referred to instead.[79]

At the onset, the complexity of this area of IP law has to be noted. Bently and Sherman correctly identified the cumbersome and highly technical nature of the evidential inquiry into the alleged breach of patent monopoly as the most challenging aspect of the infringement proceedings; a fact which has prevented the judiciary from fleshing out more general standard of proof and has confined many cases to their particular facts.[80] Having said that, three tasks have been recognised as essential to the determination of the violation of a patent holder's proprietary interests. First, the type of an infringing activity must be classified. Secondly, the said activity must fall within the ambit of awarded protection. Lastly, the court must be satisfied that the defendant has no valid defence. As the second task has been given detailed examination in the previous chapter concerning the claim interpretation, I will turn to dealing with the remaining two now.

---

[79] Principles governing patent infringement in the two jurisdictions are virtually identical. It can be said that most of the jurisprudence on the subject has been borrowed from the English common law. Similarly, the domestic legislation, on occasion, has followed verbatim the Patents Act 1977-2004 (UK).

[80] Lionel Bently and Brad Sherman, *Intellectual property law* (3rd edn, Oxford University Press 2009) 539.

3.2 Direct infringement

Patent rights can be infringed in two ways: directly or indirectly. In general, a patent gives its holder proprietary rights over the patented subject matter or process, or any component of the invention. This newly conferred monopoly bars all third parties, not authorised by the owner, from making, using, offering to be sold, selling, importing or stocking for those purposes in the State any of the aforesaid.[81] In addition, direct liability may arise through the operation of the doctrine of equivalents.[82] It is worth noting that liability in direct infringement cases is absolute - that means it attaches irrespective of the knowledge of the defendant regarding the existence of the patent or the infringer's intention to infringe.[83] It is to say that independent, accidental or unintentional actions will fall within the concept of infringing activity, despite no damage being suffered by the patentee.[84] However, it has to be borne in mind that any potential infringer has to come in possession of a patent with the intention of working it for trade purposes and with a view of making a profit.[85] The rationale behind such absolute liability is three-fold. In the most rudimentary terms, patentees should have a full enjoyment of their patent monopoly rights.[86] Secondly, under the reverse-infringement test novelty and infringement are mirrors of each other.[87] As the former is decided objectively, so shall be the latter. Thirdly, as the patented invention is disclosed to the public domain, third parties can

[81] See 35 USC 271(a); PA 1992 s 40; in general, the protection lasts for 20 years in both jurisdictions, subject to certain statutory exceptions.
[82] Text to n 66 in ch 2.4 for discussion on problems associated with the doctrine and its continuing applicability in modern patent law.
[83] One has to be mindful of PA 1992 s 40(b) that allows for knowledge to be imputed in a direct infringement in the case of an act consisting of offering the process for use.
[84] Smith Kline Corp v DDSA Pharmaceuticals Ltd [1978] FSR 109 (PA). Plaintiff does not have to show any commercial loss.
[85] Hoffmann-La Roche v Harris Pharmaceutical Ltd [1977] FSR 200 (PA).
[86] Lishman v Erom Roche (1996) 68 CPR (3d) 72 (FCTD) 77.
[87] Robert Alfred Young and Robert Neilson v Rosenthal (1884) RPC 29 (Ch) 31-3.

avoid engaging in infringing activity by accessing relevant information and altering their behaviour.[88]

3.3 Indirect infringement

Indirect infringement takes place where a person contributes to an infringement by supplying or offering to supply a patented process for use in the State to the third party not entitled to exploit the proprietary rights of the patent owner.[89] Three criteria must be satisfied before such form of secondary infringement can be ascertained. Firstly, the patent holder must establish that there is a sufficient connection between the means supplied to the third party and the essential element(s) of the infringed invention. Despite being put in rather vague terms by the Patents Court in England,[90] it requires the proof of direct infringement by others to be adduced before any secondary liability can be alleged by the patent holder. The American case of *Deepsouth Packing Co v Laitram Corp*[91] serves as a much clearer illustration of the principle, where the US Supreme Court held that:

> *(...) but it is established that there can be no contributory infringement without the fact or intention of a direct infringement.*[92]

In addition, the supplier either must know or is presumed to have known that the means supplied to an unauthorised end user are both suitable for and intended to be used in putting the invention into effect.[93] While the knowledge requirement is narrowly defined in America,[94] in this jurisdiction, by virtue of s 41(1) PA 1992, it extends to include constructive

---

[88] Bently and Sherman (n 78) 542. While the rationale holds true against mechanical inventions, its application to biological inventions is far more onerous, this being illustrated by the Canadian decision of Monsanto v Schmeiser [2004] 1 SCR 902, 2004 SCC 34 (SC of Canada).
[89] 35 USC 271(c); PA 1992 s 40(b).
[90] Hazell Grove [1995] RPC 529 (PC) 541.
[91] (1972) 406 US 518 (USSC).
[92] Ibid 526
[93] 35 USC 271(c); PA 1992 s 41(1).
[94] Both statue and the case law remain tight-lipped on how far the knowledge requirement goes. Having said that, Brandon Mark in *Just the facts: pleading claims for induced and contributory patent infringement after Iqbal* (Intellectual Property Litigation Committee, Winter 2010) at page 14 suggested that a claim for contributory patent infringement should fail in the absence of express allegations of knowledge.

knowledge judged objectively, taking into account what would be viewed as an obvious contributory infringing act to a reasonable person in the circumstances. In contrast, the US case law on patents expects the accused party to have knowledge regarding the existence of the asserted patent being infringed, something that the courts in Ireland have yet to make the subject of judicial scrutiny. Considering the fact that to be held liable, an indirect infringer must knowingly benefit from the misuse of a patent, such additional requirement to a person's state of mind would only be a logical extension of the current rules. Thirdly, the supplier will not violate patent monopoly if the means supplied by him were for non-infringing use. That is to say, they were staple commercial products.[95] Neither jurisdiction provides a statutory definition of this type of product. In *Pavel v Sony SRIS*, [96] the Patents Court in England defined it as a product of regular kind, needed daily and generally available. Similar conclusion on the point was reached by Carroll.[97] Secondary liability in America entails, apart from contributory, induced infringement. [98] While the Irish legislation uses the word 'induce' in the context of staple commercial products,[99] it is doubtful any distinction in the type of indirect infringing acts was intended on part of the legislator. Clarke and Smyth, while commenting on s 41(1), suggested that an inducement to infringe was not a necessary element, as long as the means supplied were suitable for the infringing purpose.[100] Regardless, the Irish courts, prior to enactment of the PA 1992, had recognised liability in tort where a

[95] 35 USC 271(c); PA 1992 s 41(2). Additionally, commodity of commerce products in America. However, the distinction between the two, if any whatsoever, shall be treated as immaterial for the purpose of infringement proceedings.
[96] CC/14/93 (PC).
[97] Carroll et al (n 14) 157 where he described it as a raw material or other basic product commonly available. A similar definition was put forward by Ian C. Baillie, 'Contributory infringement in the US' (1980-81) 10 CIPA 56.
[98] 35 USC 271(b). For inducement law in US, see generally Mark A Lemley, 'Inducing patent infringement' (2005) 39 UC Davis L Rev 225.
[99] PA 1992 s 41(2) provides that subsection (1) of s 41 (referring to indirect contributory infringement) shall not apply when the means referred to therein are staple commercial products, except when the third party *induces* the person supplied to commit acts which the proprietor of a patent is enabled to prevent by virtue of s 40 (direct infringement).
[100] Robert Clarke and Shane Smyth, *Intellectual property law in Ireland* (Butterworths 1997) 114.

person not only contributed to but ordered the other party to infringe by way of active inducement or participation in a conspiracy, or common design to infringe.[101] This, either accidental or intended, omission in the Act might cause confusion over whether different standards of proof apply to statutory created contributory infringement and inducement recognised at common law. In the US, the courts have elected to heighten threshold of the accused party's culpability to include the actual and specific intent to encourage a third party's violation of a patent.[102] In addition, inducing acts must be performed in furtherance of such intent. Unlike contributory infringement, the requisite intent can be proven by the existence of circumstantial evidence drawn from factual or constructive knowledge of the accused party that his actions would induce an actual infringement.[103] While this stricter approach imposes an additional burden on the patentee who must prove the requisite intent on part of the accused party, he is sufficiently compensated by seeing his protection being extended to include the induced use of staple commercial products. Becker gives a good example of a physician who would have escaped any liability for prescribing an otherwise approved pharmaceutical for an infringing off-label use if it was not for the fact that no product is excluded from a statutory definition of inducement.[104]

3.4 The pleading regime in patent infringement litigation

While there might be an on-going debate over what legal standards of knowledge and intent should apply, it has been the pleading regime in infringement actions that has attracted the most criticism lately. In America, Moore explicitly blames too relaxed notice pleading

[101] This is based on the tort principle of procuring infringement by others enunciated by Erle J in Lumley v Gye (1853) 2 E & B 216 (KB) 231. Reaffirmed by Buckley J in Belegging v Witten Industrial Diamonds [1979] FSR 59 (CA).

[102] Hewlett-Packard Co v Bausch & Lomb Inc (1990) 909 F2d 146 (Fed Cir) 1469, 15 USPQ2d 1525, 1529 ('proof of actual intent to cause the acts which constitute the infringement is a necessary prerequisite to finding active inducement ').

[103] Manville Sales v Paramount Systems (1990) 917 F2d 544 (Fed. Cir) 554; DSU Medical Corp v. JMS Co Ltd (2006) 471 F3d 1293 (Fed Cir) 1305 ('Mere knowledge of possible infringement by others, however, does not amount to inducement').

[104] Daniel M Becker, 'Indirect infringement' (2006) Nature Rev Drug Discovery Vol 5, 181.

requirements for a drastic increase in patent infringement lawsuits.[105] This lengthy and costly process forces defendants to settle, even if a case is weak on its merits, in order to avoid being overburdened with exceptionally high cost of litigation. They could also suffer a possible blow to reputation. A combination of the two might have a detrimental effect on future disclosure of advancements to already existing innovations, as dire consequences of sharing technological improvements might outweigh potential incentives, the protection of which cannot be guaranteed in the court.[106] Rule 8(a) of the Federal Rules of Civil Procedure (*Federal Rules*) imposes a low evidentiary burden on the patent holder.[107] Only short and plain statement of allegations against the third party showing patent ownership and manner of infringement must be filed.[108] To control this opportunistic behaviour of patent holders, many solutions have been put forward by commentators. Nard and Duffy suggested the creation of ad-hoc trial courts.[109] Judge Holderman and Guren proposed doctrinal changes, tightening the Court's approach to claim interpretation.[110] While Moore argued that the imbalance in patent litigation can only be mitigated by introducing a stringent pleading regime through changes in the civil procedure.[111] He recommended a heightened standard of proof for pleading an infringement that goes beyond that recently enunciated by the US Supreme Court in *Twombly*[112] and *Iqbal*[113] that unsatisfactorily, and with anything but certainty, stretches from conceivable to plausible entitlement to relief. Instead, the standard should closely approach

[105] Jonathan L Moore, 'Particularizing patent pleading: pleading patent infringement in a post Twombly world' (2010) Texas IP L Rev Vol 18:45, 452.
[106] Ibid.
[107] Fed R Civ P 8(a). General rules of pleading re: claims for relief.
[108] In addition, the patentee must notify the alleged infringer of a pending civil action against him.
[109] Craig Allen-Nard and John F Duffy, 'Rethinking patent law's uniformity principle' (2007) 101 NW UL Rev, 1619.
[110] Judge James F Holderman and Halley Guren, 'The patent litigation predicament in the United States' (2007) U ILL JL Tech & Pol'y 1, 1.
[111] Moore (n 105) 454-5.
[112] Bell AH Corp v Twombly (2007) 550 US 554 (USSC).
[113] Ashcroft v Iqbal (2009) 129 S Ct 1932 (USSC). The Court reiterated at page 1949 that all claims must contain 'factual content that allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged'.

that imposed by the Federal Rule 9(b), which verges on a more particularised pleading of facts in support of an infringement claim. Thus, under this newly proposed regime, the patent holder would be required to submit evidence of the specific act of infringement (either infringing process or product), the manner in which it exceeds the patent monopoly and point out to a specific claim(s) being infringed by the defendant's alleged actions.

While in this jurisdiction the problem of too lenient pleading in patent infringement litigation has yet to be considered by legal commentators and judges alike, upon reading of the Order 19 of the Rules of the Superior Courts (as amended) 1986, one might be hard pressed to admit any higher standard than that imposed by the Federal Rules is in place.[114] Notwithstanding, rule 7(1) allows the courts to make an order requiring the plaintiff to deliver more particularised statement of his claim upon such terms as may be just.[115] The pleading standards have been recently confirmed in *Virgin Atlantic Airways Ltd v Delta Airways, Inc*.[116] The decision followed a long line of authority conveniently summarised by Lewison J in *Easyair Ltd v Opal Telecom Ltd*.[117] Thus, the court must be satisfied that the claimant has a 'realistic' as opposed to a 'fanciful' prospect of success.[118] It has to be noted that the above principle applies only to summary judgement applications what might lead us to assume that, as the higher standard is sought to decide a case without conducting a full trial investigation,

[114] RSC (SI 15/1986) Ord 19 r 3 reads that every pleading shall contain, and contain only, a statement in a summary form of the material facts on which the party pleading relies for his claim or defence, as the case may be, but not the evidence by which they are to be proved.
[115] This is to be read in conjunction with r 7(3) which provides that particulars shall not be ordered under this rule to be delivered before defence or reply, as the case may be, unless the Court shall be of opinion that they are necessary or desirable to enable the defendant or plaintiff, as the case may be, to plead or ought for any other special reason to be so delivered.
[116] [2010] EWHC 3094 (Ch).
[117] [2009] EWHC 339 (Ch).
[118] ED & F Man Liquid Products v Patel [2003] EWCA Civ 472 (CA): a 'realistic' claim is one that carries some degree of conviction. This means a claim that is more than merely arguable.

anything short of the realistic claim will be deemed sufficient to merit a court hearing. Therefore, affirming that the current pleading standard remains low.[119]

3.5 Conclusion

Summarising, the US system is being in the process of addressing the imbalance in patent infringement litigation that is visibly tilted towards the patentee. The idea of heightened pleading regime, while extremely entertaining, is based on the Federal Rules applicable to the defendant's state of mind in cases of fraud and mistake, thus, not guaranteeing a smooth transition to proceedings for infringement due to the complex nature inherent in this type of inquiry.[120] The reason why neither Irish nor English authorities have raised any doubt about the current standard lays in a different approach to enforcing patent rights. This difference has rightly been fleshed out by Davis who argues that an average inventor's monopoly to exclude others is being seriously undermined by cumbersome and costly infringement procedure.[121] Only those with a strong corporate backing or government sponsorship can pursue an infringement action.[122] It would appear that the Irish patent system does not need an immediate revision of its current practices. It has to be remembered that patent infringement litigation is regulated by the civil procedure and, at full trial, the burden is on the patent holder to prove on the balance of probabilities that his monopoly has been unjustly exploited by others.[123] It seems just and fair to require him to plead the minimum material facts raising his entitlement to relief. Anything approaching evidentiary inquiry at such an early stage may

[119] Given proximity of jurisdictions, the interpretation of general pleading rules is likely to be followed by an Irish court.

[120] Currently applies only to the cases of the affirmative defence of inequitable conduct where the fraud on the Patent Office is alleged by supplying materially false information during prosecution of a patent application. The Courts have resisted applying the heightened pleading regime to other areas of patent law. See, e.g. Cent Admixture Pharmacy Services, Inc v Advanced Cardiac Solutions, PC (2007) 482 F3d 1347 (Fed Cir).

[121] Jennifer Davis, *Intellectual property law* (3rd edn, Oxford University Press 2008) 303.

[122] This comes in contrast with Moore's remarks that placed the accused party in the position of a victim often forced to compromise and settle to their possible disadvantage. Text to n 105 in ch 3.4 for discussion.

[123] This should be read in conjunction with s 46(1) that shifts the burden to the defendant to rebut a presumption that a process used for obtaining a new product, in absence of sufficient evidence to the contrary, resulted in obtaining the same product by the same patented process and, thus, constituting an infringement.

be seen as harmful to the patentee and have some implications on future disclosure of innovation; the danger being well illustrated by the US jurisdiction that has already overburdened the patentee with a heightened standard of proof at full trial in regard to proving induced infringement.

Chapter 4 Defences

4.1 Introduction

It has to be noted that patent monopoly is not absolute. This right can be diluted with the patent holder's consent by creating a pledge, mortgage or equitable charge over any intellectual property that gives certain privileges to the exclusive licensee.[124] In addition, both the judiciary and legislator prescribed instances where a patented invention can be exploited by a third party without that party incurring any liability. As has been mentioned in the previous chapter,[125] for a patentee to plead infringement, the court must be satisfied that the defendant has no valid defence to the proprietor's action.[126]

4.2 General defences

4.2.1 Consent of the proprietor of the patent

The third party has the consent of the proprietor of the patent.[127] It may be either express or implied. In *Belks v Willmott*,[128] the court was of the opinion that in the case of an ordinary sale of the product in the normal course of business, a licence to use or re-sale should be implied. This extends to ordinary use and repair alike.[129] Lastly, the proprietor may be barred from denying a licence if he unreasonably delayed bringing an action.[130]

4.2.2 Patent invalid

By way of a counterclaim, the alleged infringer can seek the declaration of the patent invalidity on one of the specified grounds.[131] It is possible to have the patent only partially invalid, thus, creating a loop-hole in the patent into which one's use of the invention falls.

---

[124] For full treatment of the subject, see Francis Hackett, 'Taking security over intellectual property rights in Ireland' (1994) 1(2) CLP 50.
[125] For the breakdown of tasks that must be established in patent infringement litigation, see ch 3.1.
[126] Burden of proving such defence is on the accused party by way of submitting clear and convincing evidence.
[127] 35 USC 271(a); PA 1992 s 40.
[128] (1871) LR 6 (Ch) 239.
[129] The extension seems not to have been followed by the US patent law.
[130] Habib Bank Ltd v Habib Bank AG [1982] RPC 1 (PC); the defence of laches.
[131] For grounds of invalidity see PA 1992 s 58; 35 USC 102 being its American equivalent.

However, the defendant faces a daunting task of overcoming a strong statutory presumption of validity. This essentially involves incurring significant expenses and effort associated with researching prior art to rebut the presumption. [132]

4.2.3 Infringement not novel or obvious

The defendant can raise the so-called Gillette defence where the infringing activity was being carried out in public before the original patent was granted. Thus, instead of unlawfully violating the patent monopoly, the infringer was recreating prior art in the form of a product or process that had been worked before the invention became patentable. In addition, if the third party can prove that the invention was obvious,[133] by analogy, it lacks novelty, thus, not fulfilling one of the patentability requirements.

4.2.4 Prior use

Similar to the Gillette defence, it can be argued that the commercial use of the subject matter in good faith begun before the date of filing or claiming priority for a method in the patent.[134] In America, the prior use must have occurred at least 1 year before. The Irish patent law gives no such time requirement but extends the defence beyond the mere use to include any serious and effective preparations made in advance. If successfully invoked, the third party would be allowed to continue the use of the invention. This has yet to be ascertained by the US patent law, which, for the time being, provides that in the case of successfully raising the defence, the patent shall not be invalidated.[135]

---

[132] Adam B Jaffe and Josh Lerner, *Innovation and its discontents: how our broken patent system is endangering innovation and progress, and what to do about it* (Princeton University Press 2004) 13-6.

[133] In a sense that the patent is for a use or device that would have been obvious to anyone with reasonable knowledge or skill.

[134] 35 USC 273(b)(1); PA 1992 s 55.

[135] This seems to contradict the Gillette defence as the prior use automatically implies the lack of novelty. As the method has been practiced before, the whole or part of the patent should be invalidated on the grounds of unpatentability of the subject matter.

4.3 Statutory exceptions

4.3.1 Private and non-commercial use

A patent is not being infringed if it is being worked for private and non-commercial purposes.[136] The test is subjective. Therefore, it is immaterial that knowledge acquired might be of commercial benefit, as long as the purpose is non-commercial.[137] Unlike in America, where commercial implications of experiments, regardless of the purpose, would preclude the defence unless the infringing use had been previously licensed or consented to by the proprietor of a patent.

4.3.2 Experimental use

Section 42(1) PA 1992 covers acts done for experimental purposes relating to the subject matter of the patented invention. In America, the defence is a case law creature.[138] However, the courts seem to have construed it narrowly and applied restrictively. The fact that, in the opinion of Heller and Eisenberg, might seriously hinder improvements to already patented inventions for which, unlike under the European system, a licence is required.[139] Thus, the continuous relevance of the defence as a substantive remedy remains doubtful. Siebrasse and Culver would like to see it abolished.[140] Instead, they proposed the approach where the experiments, while not solving the question of infringement in favour of the defendant, would limit damages awarded to the patentee based on the degree of their commercial purpose.[141] The greater the commercialisation of experimental uses the higher the damages to be awarded by a court. However, both jurisdictions are in agreement over precluding non-profit and

[136] PA 1992 s 42(a).
[137] E.g. where the experiments were carried out for the opposition proceedings in Smith Kline and French Laboratories v Evans Medical Ltd [1989] FSR 513 (PC).
[138] Recently confirmed by the US Supreme Court in Integra Lifesciences I Ltd v Merck KgaA (2003) 331 F3d (USSC) 860.
[139] Rebecca S Eisenberg and Michael A Heller, 'Can patents deter innovation? the anticommons in biomedical research' (1998) 280 Science 698, 699.
[140] Keith Culver and Norman Siebrasse, 'The experimental use defence to patent infringement: a comparative assessment' (2006) UT LJ Vol 56 Issue 4, 333-4.
[141] Rader J expressed a view to the same effect in dicta in Integra (n 138).

educational institutions from the use of the defence where experiments are being conducted for research purposes. While in America such exclusion has a statutory basis, Irish patent law has ample room for bringing experiments as a research tool into the remit of the defence.[142] The step that not only would be welcomed by academics but also would contribute to the Research and Development sector by actively encouraging innovation. Further judicial pronouncement on the matter is still awaited.

4.3.3 Trials of generic medicines

Section 42 of the PA 1992 Act has been amended to give effect to the European Communities (Limitation of Effect of Patent) Regulations 2006.[143] Now, patent monopoly is not deemed to have been unduly exploited by acts done in conducting studies, tests and trials to fulfil the requirements for a marketing authorisation for a generic or similar biological product for human or veterinary use alike. More detailed application of the defence is laid out in the USC 271(e)(1), which covers products primarily manufactured using recombinant DNA, TNA, hybridoma technology or other processes involving sole specific genetic manipulation techniques. Unlike in this jurisdiction, the corresponding provisions in America exclude from the ambit of the defence new animal drugs or veterinary biological products.

4.3.4 Extemporaneous preparation on prescription

The extemporaneous preparation of a medicine for individual cases in a pharmacy done in accordance with a medical prescription as issued by a registered medical practitioner or acts concerning the medicine so prepared are not considered infringement.[144] The word extemporaneous means on the spur of the moment or without prior notice, thus, implying

---

[142] 35 USC 273(a)(2) defines such experiments as commercially used, thus, outside the application of the defence. Unlike Ireland, where research could be permitted if it was conducted for non-commercial purposes or where, despite of the intention to commercialise, it was intended to make improvements to already patented invention.

[143] SI 2006/50.

[144] PA 1992 s 42(c). However, prescriptions issuing from a dental practitioner or veterinary preparations of medicines are excluded.

some sort of emergency. Clarke and Smyth raised a valid doubt as to whether the issuing practitioner must be registered in Ireland.[145] As the legislation remains silent on the matter, it will most likely fall to the judges to rule on this point of law. There is no American equivalent to the defence.

4.3.5 Vessels, land vehicles and aircraft

The patented invention, without infringing any conferred rights, can be used on certain vessels, land vehicles and aircraft registered under the Paris Convention when the said temporarily or accidentally enter the State. This covers instances of use exclusively for the needs of the above mentioned.[146]

4.4 Euro-defences

Euro-defences derive from Ireland's membership of the EU. While the Treaty of Rome[147] does not interfere with IP rights conferred in Member States (MS), there are instances in which their exercise can be restricted.[148] This was confirmed by the European Court of Justice in the *Grunding* case.[149] In *Ransburg*,[150] Aldous J stated that for the defendant to establish a Euro-defence, he must show that the attempted enforcement of the exclusive patent copyright by the plaintiff would involve a breach of the Treaty if allowed. Situations in which these defences can be invoked fall into three broad categories, which now will be discussed in turn.

4.4.1 Article 81(1)

The Article prohibits any prevention, distortion or restriction of competition by undertakings and concerted practices. An action may be brought under the Article as the object, the means

---

[145] Clarke and Smyth (n 100) 117.
[146] 35 USC 272; s 42(d) – (e).
[147] Art 295 provides that the Treaty shall in no way prejudice the rules in Member States governing the system of property ownership.
[148] This is by virtue of Art 29.4.3˚ of the Irish Constitution that confirmed the superiority of EC law over domestic laws.
[149] Consten and Grunding v EC Commission [1966] ECR 299 (ECJ). Only the existence of the right is protected by art 30. The exercise of the right is subject to limitations arising out of the rules of the Treaty.
[150] Ransburg-Gema AJ v Electrostatic Plant Systems Ltd [1991] FSR 508 (Ch).

or the consequence of an infringing agreement, which intends to distort free competition in a single market.

4.4.2 Article 102

The defence arises where the patentee abuses his dominant position by using his patented invention in an improper manner likely to negatively affect trade between MSs in a relevant product and geographic market that forms a substantial part of the common Community market. While the US patent law does not have an equivalent to the above defences *per se*, both Articles can be viewed under patent misuse. The doctrine operates in instances where the patentee either acts in violation of the antitrust laws or attempts to improperly expand the scope of the invention.[151]

4.4.3 Article 28 – 30: The exhaustion of rights doctrine

Article 30 provides for an exception to strictly construed Art(s) 28 and 29 where quantitative restrictions on exports and imports will be permitted as long as they can be justified on grounds of the protection of industrial or commercial property.[152]

The exhaustion of rights doctrine was first laid down in the *Deutsche Grammophon* case.[153] The patent rights are considered to have been exhausted that is to say cannot be invoked in infringement litigation for the purpose of preventing the import of goods into one MS if the said goods have been lawfully marketed by the patentee or with his consent in another MS.[154] Having said that, the application of the doctrine is not absolute and being the subject to certain limitations weakens the protection of free competition within the Single Market. Cornish and Llewelyn rightly observed that exhaustion is based on domestic rather than

[151] Either in a physical or temporal sense.
[152] To be read in conjunction with art 36, which invalidates such restrictions when they are proven to constitute discrimination or a disguised restriction on trade between Member States.
[153] Deutsche Grammophon GmbH v Metro-SB Grossmarkte GmbH & Co [1971] ECR 487 (ECJ).
[154] Merck and Co Inc v Stephar BV [1981] ECR 2063 (ECJ).

international principles. Thus, the proprietor of a patent can continuously use national rights to prevent the importation of goods sold abroad by him, goods obtained from an associated enterprise or originating in non-EU countries.[155] Moreover, it cannot be said that the patentee has consented when he was under a legal obligation to market goods or the sale was a result of a compulsory licence.[156]

In America, the doctrine was revisited in broad terms by the US Supreme Court in *Quanta Computer, Inc v LG Electronics Inc*.[157] Scholars and legal commentators have been critical of the decision as failing to resolve the crucial difficulty in applying the doctrine, namely the methods for determining whether the sale has been authorised by the patent owner. The judgement seems at odds with modern licensing system where licences may be granted either expressly through agreements or through settlements, or implied in law or fact. The court refused to uphold post-sale restrictions on licensed components due to the lack of express provisions to that end, despite the existence of collateral agreements in the form of notices that suggested not wanting to give such broad rights to a licensee. This failure to imply relevant restrictions in fact led to a questionable exhaustion of patentee's rights and complete loss of any further protection for his patented invention.

4.5 Conclusion

While both jurisdictions present the defendant with a broad mix of statutory and judicial defences, proving any of these is time consuming and requires significant financial resources. Under Irish patent law, the defences are construed in a clear and concise manner, and its application appears to favour the defendant who is already being overburdened with adducing the evidence of exceptions sought. The fact of being strongly rooted in the statutory wording,

---

[155] W.R. Cornish and David Llewelyn, *Intellectual Property: patents, copyright, trade marks and allied rights* (4th edn, Sweet & Maxwell 1999) 41.
[156] Pharmon BV v Hoechst AG [1985] ECR 2281 (ECJ).
[157] (2008) 1285 S Ct 2109 (USSC).

undoubtedly, assisted the courts in this jurisdiction in consistent interpretation and application of the defences. Unlike in America, where the judiciary has grappled with construing less detailed legislation on patent infringement. This combined with a number of common law created defences have affected the clarity of law and have produced sometimes contradicting exceptions to the general rules. To improve this lengthy and costly patent litigation process, the introduction of compulsory licensing system for certain activities associated with working the patented invention might be considered. This would not only reduce the number of available defences but also clearly mark out boundaries of the conferred protection, indicating what use or improvement of the patent would be tolerated. However, such system could only work in tandem with an ad-hoc court or body exclusively dealing with patent infringement cases, reducing the workload of the Irish High Court and the American Federal Circuit.[158]

[158] Such institution could be modelled on the UK Patents Court.

Conclusion

On a final note, this work has compared the American and European approaches to the infringement of patent monopoly. Unsurprisingly, both jurisdictions share similarities when it comes to enforcing patent rights. This derives from the fact that both are strongly anchored in common law principles. The EPC achieved a fine blend of common and continental law opting for the middle road between the strictness of the former and guiding purpose of the latter. Nonetheless, the failure to produce a unified patent system at European level has caused confusion in the minds of judges and inventors alike, possibly diminishing rewards for the disclosure of technological information. This legal uncertainty, as to the extent of protection offered by a European patent, can only be resolved by harmonising the patent litigation procedure, with a special emphasis placed on the common method of the interpretation of the specification. It is highly unlikely that the EPC will be amended to that effect. Such a step would require sacrificing its flexible operation. Currently, a potential patentee is at liberty to designate States where others will be excluded from working his invention. While the ability to create a bundle of territorial monopolies makes the Convention attractive, it distorts the operation of a free single market. Thus, the only possible way of escaping this dilemma is through the introduction of the European patent system under the auspices of the EU, which would guarantee the approximation of territorial laws in all the Member States. For this concept to materialise, a transition from a mere Union of States to something resembling the federal system in America must occur first.

For the time being, applying for a patent in one national State or reciprocal regional jurisdictions[159] remains the only viable alternative. Irish patent law, despite being in the process of developing, has struck a fair balance between encouraging innovation and, at the

[159] England and Ireland being an example of such jurisdictional reciprocity.

same time, not hampering further technological advancement to already patented inventions through overly strict licensing system. The rewards for disclosing information by patentees are reasonably protected. Relatively low pleading requirements allow one to easily bring a court action seeking compensation for unlawful exploitation of patent monopoly. However, any proprietary rights might be challenged by the third party being in a position to prove one of many broadly defined defences or statutory exceptions to infringement. This defeats opportunistic behaviour of patent owners who, like in America, might seek to bully others with unmerited infringement allegations forcing them to settle out of court, thus, taking the competitive factor out of the system. Notwithstanding, limiting the protection to only one State restricts one's revenue channels based on royalties and granted licenses, making the disclosure of an invention less profitable. In addition, the lack of ad-hoc bodies hearing patent disputes has led to lengthy and costly litigation for both sides.

In America, the unitary character of the patent system has been tainted by confusion over the claim interpretation methods. It is either the legislator or the US Supreme Court that should take a more decisive stand on the matter and give priority to the intrinsic approach.[160] In addition, contradictory views on the enforcement of patent rights at different stages of litigation remain in place. Legal scholars and commentators have been critical of a low pleading regime arguing that the current balance is unsatisfactorily tilted in favour of the plaintiff. Despite these criticisms, the courts have failed to address this imbalance at the full hearing by restrictively construing defences available to the alleged infringer. This can be explained by the existence of clashing approaches to patent protection. Under the prospect theory, the inventor should be entitled to all of the social benefits of his invention, including any improvements made by others. This would result in providing the ultimate incentive to

[160] A legislative instrument modelled on the Protocol on the Interpretation of Article 69 EPC would be welcomed.

create. On the other hand, the cumulative theory favours the improvers. Thus, radical modifications to patents shall not be treated as an infringement.[161] Reverting to the European approach is recommended. This would help balance the conflicting rights of inventors and improvers by encouraging innovative development through competitive improvements.[162] At the same time, this would prioritise the interests of the patentee.[163]

Given the complex and burdensome nature of patent infringement litigation, the creation of a perfect regime is highly unlikely. However, both jurisdictions might learn from their experiences and incorporate certain features characteristic of their counterpart. Thus, one may not be in a position to choose the more efficient system of the two as each has its own strengths and weaknesses. The most difficult task will be to find the right balance between them. A long overdue overhaul of the current patent laws in Europe and America along the lines of that conducted for copyright is highly recommended.[164]

[161] For reverse doctrine of equivalents, see Robert Merges, 'Intellectual property rights and bargaining breakdown: the case of blocking patents' (1994) 62 Tenn L Rev 75.
[162] I took the idea of the European approach as the middle road from Culver and Siebrasse (n 137) 346. Unlike the authors, who rejected both the US and European approaches as redundant, I was entertained by the premise who I saw as a way of streamlining US patent litigation.
[163] Newman J in Integra (n 138) commented at page 44 that 'it is the initial inventor whose rights must receive primary consideration in an effective patent law, for the public interest starts with the threshold invention'.
[164] For example, see the Gowers Review of Intellectual Property (The Controller of Her Majesty's Stationery Office 2006) commissioned in the UK in 2006.

Appendix one: Remedies for infringement

Although important, this aspect of patent infringement litigation falls outside the remit of this work, thus, only few brief observations will be made. Normally, in order to preserve a status quo until the merit hearing takes place, a patentee will seek an injunctive relief during pre-trial stages to restrain the defendant from infringing. It has to be remembered that an injunction is an equitable relief granted at the discretion of the court and damages may be awarded in lieu if it is fair and just to do so.

Upon succeeding at full trial, the patent owner is entitled, *inter alia*, to choose, at his option, between damages compensating for the loss as a result of actual infringement or an account of profits.[165] However, both shall not be awarded in respect of the same infringement.

[165] For full treatment of the subject, see Niamh Brennan and John Hennessy, 'Forensic accounting and intellectual property infringement' (2008) 8(5) CLP 112.

Appendix two: Consolidated United States Code Title 35 (Patents) 2007, Chapter 28 on Infringement of patents

271 Infringement of patent (omitted).

272 Temporary presence in the United States (omitted).

273 Defense to infringement based on earlier inventor.

35 U.S.C. 273 Defense to infringement based on earlier inventor.

DEFENSE TO INFRINGEMENT - (1) IN GENERAL— It shall be a defense to an action for infringement under section 271 of this title with respect to any subject matter that would otherwise infringe one or more claims for a method in the patent being asserted against a person, if such person had, acting in good faith, actually reduced the subject matter to practice at least 1 year before the effective filing date of such patent, and commercially used the subject matter before the effective filing date of such patent.

(2) EXHAUSTION OF RIGHT - The sale or other disposition of a useful end product produced by a patented method, by a person entitled to assert a defense under this section with respect to that useful end result shall exhaust the patent owner's rights under the patent to the extent such rights would have been exhausted had such sale or other disposition been made by the patent owner.

(3) LIMITATIONS AND QUALIFICATIONS OF DEFENSE - The defense to infringement under this section is subject to the following:

(A) PATENT - A person may not assert the defense under this section unless the invention for which the defense is asserted is for a method.

(B)DERIVATION - A person may not assert the defense under this section if the subject matter on which the defense is based was derived from the patentee or persons in privity with the patentee.

(C) NOT A GENERAL LICENSE - The defense asserted by a person under this section is not a general license under all claims of the patent at issue, but extends only to the specific subject matter claimed in the patent with respect to which the person can assert a defense under this chapter, except that the defense shall also extend to variations in the quantity or volume of use of the claimed subject matter, and to improvements in the claimed subject matter that do not infringe additional specifically claimed subject matter of the patent.

(4) BURDEN OF PROOF - A person asserting the defense under this section shall have the burden of establishing the defense by clear and convincing evidence.

(5) ABANDONMENT OF USE - A person who has abandoned commercial use of subject matter may not rely on activities performed before the date of such abandonment in establishing a defense under this section with respect to actions taken after the date of such abandonment.

(6) PERSONAL DEFENSE - The defense under this section may be asserted only by the person who performed the acts necessary to establish the defense and, except for any transfer to the patent owner, the right to assert the defense shall not be licensed or assigned or transferred to another person except as an ancillary and subordinate part of a good faith assignment or transfer for other reasons of the entire enterprise or line of business to which the defense relates.

(7) LIMITATION ON SITES - A defense under this section, when acquired as part of a good faith assignment or transfer of an entire enterprise or line of business to which the defense relates, may only be asserted for uses at sites where the subject matter that would otherwise infringe one or more of the claims is in use before the later of the effective filing date of the patent or the date of the assignment or transfer of such enterprise or line of business.

(8) UNSUCCESSFUL ASSERTION OF DEFENSE - If the defense under this section is pleaded by a person who is found to infringe the patent and who subsequently fails to demonstrate a reasonable basis for asserting the defense, the court shall find the case exceptional for the purpose of awarding attorney fees under section 285 of this title.

(9) INVALIDITY - A patent shall not be deemed to be invalid under section 102 or 103 of this title solely because a defense is raised or established under this section.

Recommendation

As a general word of recommendation, it is suggested that the available defences be construed in clearer and a more concise language, and with a greater attention to detail to assist the judges in their consistent interpretation and application alike.

Additionally, the extemporaneous preparation of the medicine on prescription defence shall be given a statutory footing and trials for generic medicines shall be extended to include studies, tests and trials of new animal drugs and veterinary biological products.

Lastly, the position of a third party raising the prior use defence shall be clarified, especially regarding whether he would be entitled to continue the use of the already patented invention if successfully invoked. It is recommended that the commercial use of the subject matter be construed broadly to include any serious and effective preparations made in advance.

Appendix three: Patents Act 1992, s 41 on Prevention of indirect use of invention

Section 41

Prevention of indirect use of invention

(1) A patent while it is in force shall also confer on its proprietor the right to prevent all third parties not having his consent from supplying or offering to supply in the State a person, other than a party entitled to exploit the patented invention, with means, relating to an essential element of that invention, for putting it into effect therein, when the third party knows, or it is obvious in the circumstances to a reasonable person, that the said means are suitable and intended for putting that invention into effect.

(2) *Subsection (1)* shall not apply when the means referred to therein are staple commercial products, except when the third party induces the person supplied to commit acts which the proprietor of a patent is enabled to prevent by virtue of *section 40*.

(3) Persons performing acts referred to in *paragraph (a), (b), or (c) of section 42* shall not be considered to be parties entitled to exploit an invention pursuant to *subsection (1)*.

Recommendation

The distinction between indirect contributory and induced infringement shall be made. The contextual use of the word 'induces' in s 41(2) may be misleading as to whether the latter type of activity is prohibited by the statue. S 41 either is redrafted to reflect the existence of the two distinctive infringing acts or amended to make it clear that the legislator did not intend to create a separate category of indirect infringement while drawing it up. For the time being, there is confusion over whether different standards of proof apply to statutory created contributory infringement and inducement recognised at common law.

Bibliography

Books

Bently L and Sherman B, *Intellectual property law* (3rd edn, Oxford University Press 2009)

Burnham W, *Introduction to the law and legal system of the United States* (4th edn, Thomson West 2006)

Carroll G et al, 'Patents' in Hyland M (ed), *Technology and IP law: professional practice guide* (Tottel 2008)

Clarke R and Smyth S, *Intellectual property law in Ireland* (Butterworths 1997)

Cornish WR and Llewelyn D, *Intellectual property: patents, copyright, trade marks and allied rights* (4th edn, Sweet & Maxwell 1999)

Davis J, *Intellectual property law* (3rd edn, Oxford University Press 2008)

Jaffe AB and Lerner J, *Innovation and its discontents: how our broken patent system is endangering innovation and progress, and what to do about it* (Princeton University Press 2004)

Muir I, *European patent law: law and procedure under the EPC and PCT* (2nd edn, Oxford University Press 2002)

Nelson J, *International patent treaties with commentary* (Oceana 2007)

Singer R, *The European patent convention: a commentary* (first published 1989, Sweet & Maxwell 1995)

Articles

Allen-Nard C and Duffy JF, 'Rethinking patent law's uniformity principle' (2007) 101 NW UL Rev

Arrow KJ, 'Economic welfare and the allocation of resources for invention' in Richard Nelson (ed), *The rate and direction of inventive activity: economic and social factors* (Cambridge 1962)

Baillie IC, 'Contributory infringement in the US' (1980-81) 10 CIPA 56

Baker T, 'Pioneers in technology: a proposed system for classifying and rewarding extraordinary inventions' (2003) 45 ARIZ L Rev 445

Becker DM, 'Indirect infringement' (2006) Nature Rev Drug Discovery, Vol 5

Brennan N and Hennessy J, ‘Forensic accounting and intellectual property infringement’ (2008) 8(5) CLP 112

Burke TP, ‘Software patent protection: debugging the current system’ (1994) 69 Notre Dame L Rev 1115

Culver K and Siebrasse N, ‘The experimental use defence to patent infringement: a comparative assessment’ (2006) UT LJ Vol 56 Issue 4

Eisenberg RS and Heller MA, ‘Can patents deter innovation? the anticommons in biomedical research' (1998) 280 Science 698

Farmer SJ and Grund M, ‘An overview of the new European Patent Convention and its potential impact on European patent practice’ (2007) Bio-Science L Rev Vol 9 Issue 2

Golden JM, ‘Construing patent claims according to their “interpretive community”: a call for an attorney-plus-artisan perspective’ (2008) Harv JOLT Vol 21 No 2

Hackett F, ‘Taking security over intellectual property rights in Ireland’ (1994) 1(2) CLP 50

Harmer R, ‘Construing patent claims in light of the specification versus importing claim limitations from the specification: is there any difference?’ (2010) AIPJ Vol 4 Issue 1

Holderman JF and Guren H, ‘The patent litigation predicament in the United States’ (2007) U ILL JL Tech & Pol'y 1

Lemley MA, ‘Inducing patent infringement’ (2005) 39 UC Davis L Rev 225

Merges R, ‘Intellectual property rights and bargaining breakdown: the case of blocking patents’ (1994) 62 Tenn L Rev 75

Moore JL, ‘Particularizing patent pleading: pleading patent infringement in a post Twombly world’ (2010) Texas IP L Rev Vol 18:45

Mullally KC, ‘Patent hermeneutics: form and substance in claim construction’ (2007) 59 FLA L REV 333

Parkes A, ‘The new patent regime’ in Coughlan P (ed), *European initiatives in intellectual property: papers from the I.C.E.L. conference, November 1992* (Irish Centre for European Law, TCD 1993)

Petherbridge L, ‘On the decline of the doctrine of equivalents’ (2010) Cardozo L Rev Vol 31 Issue 4

Sanders M, ‘A survey of post-Philips claim construction cases’ (2007) 22 Berkley Tech LJ 215

Tamayo YA, ‘Patents absurd: expanded State immunity in the global knowledge market’ (2001) 6 VA JL & Tech 1

Vandebeek V, ‘Realizing the European Community Common Market by unifying intellectual property law: deadline 1992’ (1990) BYU L Rev Vol 1990 Issue 4

Other Publications

Brandon M, *Just the facts: pleading claims for induced and contributory patent infringement after Iqbal* (Intellectual Property Litigation Committee, Winter 2010)

Fysh M, ‘Scope of claims’ (Open forum, Monte Carlo 1999)

Gowers A, ‘Gowers Review of Intellectual Property’ (The Controller of Her Majesty’s Stationery Office 2006)