NALSAR University of Law
HYDERABAD

Cases and Materials on
Intellectual Property Law

Compiled and Edited by

V. K. Unni

For private circulation

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Case Law Section

Copyright

PREFACE

This reading material has endeavoured to cover most of the important cases in the Laws of Copyright, Patents & Trade Marks including the latest cases, which will add new dimensions to this branch of Law. The course will also strive to make a comparative study of the various judgements emanating from U.S.A and UK/ E.U as such a study is very important in certain emerging sectors like software patents and biotech patents.

The material is divided into 2 sections, a) case-law and b) journal. The former covers many of the important cases in all the 3 branches of the subject including the classics like University London Press, Nichols v. Universal Pictures, Baker v Selden, Designer's Guild, Catnic v Hill, Diamond v Chakrabarty, Diamond v Diehr, Festo, WalMart v. Samara Brothers, Arsenal v Reed etc. The journal section covers various emerging areas such as data exclusivity, open source, traditional knowledge, shape marks, colour marks, software patents, gene patents, database rights, copyright infringement & Internet etc.

V.K. UNNI

CASES

University of London Press Ltd. v. University Tutorial Press Ltd. Chancery Division, [1916] 2 Ch. 601

Decided on July 26, 1916.

CONCEPT OF ORIGINALITY, LITERARY WORKS

Examiners were appointed for a matriculation examination of the University of London, a condition of appointment being that any copyright in the examination papers should belong to the University. The University agreed with the plaintiff company to assign the copyright, and by deed purported to assign it, to the plaintiff company. After the examination the defendant company issued a publication containing a number of the examination papers (including three which had been set by two examiners who were co-plaintiffs), with criticisms on the papers and answers to questions. In an action for infringement of copyright:

Held, that copyright subsisted in the examination papers as "original literary work" within the meaning of s. 1, sub-s. 1, of the Copyright Act, 1911; that the copyright vested in the examiners; that the examiners were not "in the employment" of the University "under a contract of service" within the meaning of s. 5, sub-s. 1 (b); that the examiners were subject to an obligation under their appointment to assign the copyright to the University or as the University might direct; that, the University having assigned its rights to the plaintiff company, the plaintiff company was equitably entitled to the copyright; that the plaintiff company, having joined two of the examiners as co-plaintiffs, could sue for infringement of copyright in the papers set by the two examiners, but must fail as to the papers set by the other examiners; and that the defendant company, having failed to bring itself within the protection of s. 2, sub-s. 1 (i.), had infringed the copyright in the papers set by the co-plaintiffs.

PETERSON J.

After stating the facts. The first question that is raised is, Are these examination papers subject of copyright? Sect. 1, sub-s. 1, of the Copyright Act of 1911 provides for copyright in "every original literary dramatic musical and artistic work," subject to certain conditions which for this purpose are immaterial, and the question is, therefore, whether these examination papers are, within the meaning of this Act, original literary works. Although a literary work is not defined in the Act, s. 35 states what the phrase includes; the definition is not a completely comprehensive one, but the section is intended to show what, amongst other things, is included in the description "literary work," and the words are "'Literary work' includes maps, charts, plans, tables, and compilations." It may be difficult to define "literary work" as used in this Act, but it seems to be plain that it is not confined to "literary work" in the sense in which that phrase is applied, for instance, to Meredith's novels and the writings of Robert Louis Stevenson. In speaking of such writings as literary works, one thinks of the quality, the style, and the literary finish which they exhibit. Under the Act of 1842, which protected "books," many things which had no pretensions to literary style acquired copyright; for example, a list of registered bills of sale, a list of foxhounds and hunting days, and trade catalogues; and I see no ground for coming to the conclusion that the present Act was intended to curtail the rights of authors.

In my view the words "literary work" cover work, which is expressed in print, or writing, irrespective of the question whether the quality or style is high. The word "literary" seems to be used in a sense somewhat similar to the use of the word "literature" in political or electioneering literature and refers to written or printed matter. Papers set by examiners are, in my opinion, "literary work" within the meaning of the present Act. Assuming that they are "literary work," the question then is whether they are original. The word "original" does not in this connection mean that the work must be the expression of original or inventive thought. Copyright Acts are not concerned with the originality of ideas, but with the expression of thought, and, in the case of "literary work," with the expression of thought in print or writing.

The originality which is required relates to the expression of the thought. But the Act does not require that the expression must be in an original or novel form, but that the work must not be copied from another work - that it should originate from the author. In the present case it was not suggested that any of the papers were copied. Professor Lodge and Mr. Jackson proved that they had thought out the questions which they set, and that they made notes or memoranda for future questions and drew on those notes for the purposes of the questions which they set. The papers which they prepared originated from themselves, and were, within the meaning of the

Act, original. It was said, however, that they drew upon the stock of knowledge common to mathematicians, and that the time spent in producing the questions was small. These cannot be tests for determining whether copyright exists. If an author, for purposes of copyright, must not draw on the stock of knowledge which is common to himself and others who are students of the same branch of learning, only those historians who discovered fresh historical facts could acquire copyright for their works. If time expended is to be the test, the rapidity of an author like Lord Byron in producing a short poem might be an impediment in the way of acquiring copyright, and, the completer his mastery of his subject, the smaller would be the prospect of the author's success in maintaining his claim to copyright.

Some of the questions, it was urged, are questions in book work, that is to say, questions set for the purpose of seeing whether the student has read and understood the books prescribed by the syllabus. But the questions set are not copied from the book; they are questions prepared by the examiner for the purpose of testing the student's acquaintance with the book, and in any case it was admitted that the papers involved selection, judgment, and experience. This objection has not, in my opinion, any substance; if it had, it would only apply to some of the questions in the elementary papers, and would have little, if any, bearing on the paper on advanced mathematics. Then it was said that the questions in the elementary papers were of common type; but this only means that somewhat similar questions have been asked by other examiners. I suppose that most elementary books on mathematics may be said to be of a common type, but that fact would not give impunity to a predatory infringer. The book and the papers alike originate from the author and are not copied by him from another book or other papers. The objections with which I *610 have dealt do not appear to me to have any substance, and, after all, there remains the rough practical test that what is worth copying is prima facie worth protecting. In my judgment, then, the papers set by Professor Lodge and Mr. Jackson are "original literary work" and proper subject for copyright under the Act of 1911.

The next question is, In whom did the copyright in the examination papers vest when they had been prepared? This problem must be solved by the determination of the effect of s. 5 of the Act of 1911. The author, by that section, is the first owner of the copyright, subject only to the exceptions contained in the Act. The only relevant exception is to be found in s. 5, sub-s. 1 (b). [His Lordship read the section so far as relevant [FN36], and continued:] The examiners were no doubt employed by the University of London, and the papers were prepared by them in the course of their employment. But, in order that s. 5, sub-s. 1 (b), should be applicable, the examiners must have been "under a contract of service or apprenticeship"; and accordingly the plaintiffs contend that the papers were prepared by the examiners in the course of their employment under a contract of service, and that, therefore, the copyright in the papers belonged to the University of London. The meaning of the words "contract of service" has been considered on several occasions, and it has been found difficult, if not impossible, to frame a satisfactory definition for them. In Simmons v. Heath Laundry Co. [FN37], in which the meaning of these words in the Workmen's Compensation Act, 1906, was discussed, Fletcher Moulton L.J. pointed out that a contract of service was not the same thing as a contract for service, and that the existence of direct control by the *611 employer, the degree of independence on the part of the person who renders services, the place where the service is rendered, are all matters to be considered in determining whether there is a contract of service. As Buckley L.J. indicated in the same case, a contract of service involves the existence of a servant, and imports that there exists in the person serving an obligation to obey the orders of the person served. A servant is a person who is subject to the commands of his master as to the manner in which he shall do his work. A person who is employed by a company at a fixed annual salary to supply weekly articles for a periodical is not a servant within s. 209 of the Companies Consolidation Act, 1908:

In re Beeton & Co. [FN38]; nor can a visiting physician of a hospital who, for an annual salary, undertakes to exercise his judgment, skill, and knowledge in determining whether a patient can safely be discharged be properly described as a servant: Evans v. Liverpool Corporation. [FN39]In Byrne v. Statist Co. [FN40] the meaning of the words in s. 5 of the Copyright Act, 1911, was considered in the case of a person, permanently employed on the editorial staff of a newspaper, who was specially employed by the proprietors to translate and summarize a speech. He did the work in his own time and independently of his ordinary duties, and it was held that in doing so he did not act under a contract of service. In the present case the examiner was employed to prepare the papers on the subject in respect of which he was elected or appointed examiner. He had to set papers for September, 1915, and January and June, 1916, and his duty also comprised the perusal of the students' answers, and the consideration of the marks to be awarded to the answers. For this he was to be paid a lump sum. He was free to prepare his questions at his convenience so long as they were ready by the time appointed for the examination, and it was left to his skill and judgment to decide what questions should be asked, having regard to the syllabus, the book work, and the standard of knowledge to be expected at the matriculation examination. It is true that the University issued instructions to examiners for the conduct of the examination, but these instructions are only regulations framed with a view to securing accuracy in the system of marking. Professor Lodge and Mr. Jackson were *612 regularly employed in other educational establishments and were not part of the staff of the London University, and it was not suggested that the other examiners were on the staff of the University. In my judgment it is impossible to say that the examiner in such circumstances can be appropriately described as the servant of the University, or that he prepared these papers under a contract of service.

FN36 Copyright Act, 1911, s. 5: "(1.) Subject to the provisions of this Act, the author of a work shall be the first owner of the copyright therein: Provided that .... (b) where the author was in the employment of some other person under a contract of service or apprenticeship and the work was made in the course of his employment by that person, the person by whom the author was employed shall, in the absence of any agreement to the contrary, be the first owner of the copyright, but where the work is an article or other contribution to a newspaper, magazine, or similar periodical, there shall, in the absence of any agreement to the contrary, be deemed to be reserved to the author a right to restrain the publication of the work, otherwise than as part of a newspaper, magazine, or similar periodical."

The plaintiffs' next contention was that the copyright in the papers vested at once in the University by virtue of the fact that the examiners were employed on the terms that the copyright should belong to the University, who thereby became equitable assignees of the copyright; and Grace v. Newman [FN41] was cited in support of this argument. Grace v. Newman [FN42] seems to be one of those cases which under the present Act would come within s. 5, sub-s. 1 (b), but, however that may be, the present question must be determined by the provisions of the Act of 1911. Sect. 5 declares that, subject to the provisions of the Act, the author shall be the first owner of the copyright, and that every assignment of a copyright must be in writing, signed by the owner or his agent. The only exceptions from the rule that the author is the first owner are the cases mentioned in s. 5, sub-s. 1 (a) and (b), which do not cover the present case. The examiner was the first owner, and he has not assigned the copyright in writing signed by him or his agent. The copyright therefore remains in the examiners, subject to the obligation under the contract of employment to assign it to the University or as it may direct. The copyright was vested in the examiners, but the University was equitably entitled to it subject to the restrictions contained in the proviso to s. 5, sub-s. 2. The University assigned its rights to the plaintiff company, which is now equitably entitled to the copyright. In order to sue for infringement of the copyright, the plaintiff company must either obtain a proper assignment of the copyright or join the examiners, who are the legal owners of the copyright, as parties. It has not obtained an assignment, but it has in the course of the action joined Professor Lodge and Mr. Jackson as co-plaintiffs. The plaintiffs can therefore sue for infringement of the copyright in the papers prepared by Professor Lodge and Mr. Jackson, but, in the absence of the other examiners, the action fails *613 in respect of the copyright in the papers which were composed by them.

The last question is whether the defendants have infringed the copyright in the papers prepared by Professor Lodge and Mr. Jackson. Examination papers are useful for educational purposes, and, as Professor Lodge said, teachers are "very glad to get copies of old questions for use in tuition," and it is important that students should get the questions for purposes of "instruction." This view was common to the witnesses on both sides. Recognizing this demand, the plaintiff company published the matriculation papers. With the same object in view, the defendants published the "London Matriculation Directory," which contains sixteen of the matriculation papers for January, 1916, including the papers on arithmetic and algebra, geometry, and more advanced mathematics, set by Professor Lodge and Mr. Jackson. The defendants' publication also includes, amongst others, answers to the questions in the papers on arithmetic and algebra and geometry, but does not provide solutions for the problems in the paper on more advanced mathematics; and it also comprises a short criticism of the construction of the various papers, which appears to be intended for the guidance of future examiners rather than for the edification of possible students. These criticisms, however, appear to me to be of very little moment.

The defendants on these facts contend that their publication of the three papers set by Professor Lodge and Mr. Jackson is a fair dealing with them for the purposes of private study within s. 2, sub-s. 1, of the Act of 1911, and is therefore not an infringement of copyright. It could not be contended that the mere republication of a copyright work was a "fair dealing" because it was intended for purposes of private study; nor, if an author produced a book of questions for the use of students, could another person with impunity republish the book with the answers to the questions. Neither case would, in my judgment, come within the description of "fair dealing." In the present case the paper on more advanced mathematics has been taken without any attempt at providing solutions for the questions, and the only way in which the defendants have dealt with this paper is by appropriating it, except that there are eleven lines of criticism of it, dividing the questions into easy, troublesome, and difficult questions. *614 To the questions in the other two papers answers are provided. Both publications are intended for educational purposes and for the use of students, and in my judgment the defendants have failed to bring themselves within the protection of s. 2, sub-s. 1 (i.), of the Act.

I am therefore of opinion that the plaintiffs ought to succeed so far as the questions prepared by Professor Lodge and Mr. Jackson for the examination in January, 1916, are concerned, and that the present action, so far as it relates to the papers set by the other examiners, fails.

Ladbroke (Football) Ltd v William Hill (Football) Ltd Also known as : William Hill (Football) Ltd v Ladbroke (Football) Ltd (HL) House of Lords, [1964] 1 W.L.R. 273, [1964] 1 All E.R. 465

Decided on 21st January 1963

SUBSISTENCE OF COPYRIGHT

In deciding whether there is a breach of copyright one should first decide whether the plaintiff's work as a whole is entitled to copyright, and then see whether the part taken is a substantial part. A wrong result can easily be reached if one begins by dissecting the plaintiff's work and asking whether section A could be the subject of copyright if it stood by itself, or whether section B could be protected if it stood by itself, and so on. A fixed odds football coupon is the subject of copyright. R devised a form of fixed odds football betting coupon offering in an attractive way 148 varieties of wager at widely different odds. The particular matches and odds were altered each week. Some of the wagers were used by other bookmakers but considerable skill had gone into the compilation and presentation of the 148 wagers. A copied from R's coupon 15 of the 16 lists, arranging them in the same order, in many cases with the same headings, and with similar explanatory notes. Neither the particulars of matches nor the odds were copied. In an action by R against A for breach of copyright, held that R's coupon was a compilation and so an original literary work, the subject of copyright, and that A had reproduced a substantial part of it and the action therefore succeeded. (William Hill (Football) v. Ladbroke (Football) [1980] R.P.C. 539 affirmed; Collis v. Cater Stoffell and Fortt (1898) 78 L.T. 613 applied and London University Press v. University Tutorial Press [1916] 2 Ch. 601 applied and dictum of Peterson J. in the latter case approved; Purefoy Engineering Co v. Sykes Boxall & Co (1955) 72 R.P.C. 89 distinguished and G. A. Cramp & Sons v. Frank Smythson [1944] A.C. 329 distinguished).

Exxon Corp v Exxon Insurance Consultants International Ltd (CA) Court of Appeal, [1982] Ch. 119, [1981] 3 All E.R. 241

Decided 12th June 1981

DE MINIMUS PRINCIPLE

Copyright cannot subsist in words merely because they can be described as "original," "literary" and "work" under the Copyright Act 1956 s. 2(1); the work must offer information, instruction or pleasure in the form of the literary enjoyment. P Co an oil company invented the word "Exxon" as its corporate name and trade mark. D Co borrowed the name for itself without P's consent. P Co claimed injunctions against D Co restraining them from passing off their goods or services as P Co's, and from infringing P Co's copyright in the name. The judge granted the first injunction but refused the second on the ground that P Co had no right of copyright in the name. P Co appealed, contending that they held the copyright in "Exxon" as an original literary work under s. 2 (1) of the Copyright Act 1956.

Summary: Held, dismissing the appeal, that copyright could not exist in words merely because they could be described as "original," "literary" and "work"; the work must offer information, instruction or pleasure in the form of literary enjoyment. In that sense, "Exxon" was not an original literary work. (Dictum of Davey L.J. in Hollinrake v. Truswell [1894] 3 Ch. 420 applied).

Nora Beloff v. Pressdram Ltd
(Ch D) Chancery Division, [1973] F.S.R. 33, [1973] R.P.C. 765

Decided on 18 October 1972

OWNERSHIP OF COPYRIGHT

Abstract: Exemplary damages cannot be awarded for breach of copyright. B was political correspondent of a newspaper owned by O Co. and shared in the editorial responsibility. Apart from letters of appointment to its staff given to her by the editor in 1947 she had no written contract of employment. From time to time she broadcast, appeared on television, wrote for other newspapers and had leave to write books, but in effect worked full-time for O Co., receiving a substantial salary from which deductions were made for PAYE and a pensions scheme. She wrote an internal memorandum relating to a prominent member of the government which was "leaked" to and published verbatim by a magazine owned by D in an article attacking B personally in insulting terms. The editor of O Co.'s newspaper, after seeking the views of certain of the directors, purported to assign the copyright in the memorandum to B who sued D for infringement of copyright in the memorandum claiming, inter alia, statutory and aggravated and exemplary damages.

Held, that B's claim failed because (1) she was employed by O Co. under a "contract of service" within s. 4(4) of the Act and so the copyright in the memorandum had vested in O Co. and that the editor had not been shown to have authority to assign it to B, (2) that D would have had no defence that publication was in the public interest since such a defence only justifies disclosure of matters relating to the country's security, breach of law, including statutory duty, fraud and other matters destructive of the country or its people, including matters medically dangerous to the public, and other misdeeds of similar gravity; (3) that publication of "leaked " information is not a "fair dealing" for the purposes of criticism or review within s. 6(2) of the Copyright Act 1956; (4) that if B's claim had succeeded she could not have been awarded aggravated or punitive damages because s. 17(3) of the Copyright Act 1956 makes special provision for awarding "additional damages." (Dicta of Denning L.J. in Stevenson Jordan and Harrison v. Macdonald and Evans [1952] 1 T.L.R. 101 applied of Cooke J. in Market Investigations v. Minister of Social Security [1969] 2 Q.B. 173 applied, of Diplock L.J. in Freeman and Lockyer (a firm) v. Buckhurst Park Properties (Mangal) [1964] 2 Q.B. 480 applied, and of Denning L.J. and Salmon L.J. in Initial Services v. Putterill [1968] 1 Q.B. 396 applied).

British Leyland Motor Corp Ltd v Armstrong Patents Co Ltd
(HL) House of Lords, [1986] F.S.R. 221, [1986] R.P.C. 279

Decided on 27 February 1986

INFRINGEMENT OF ARTISTIC WORKS

A car manufacturer is not entitled to interfere with a car owner's inherent right to repair his car as economically as possible by asserting its copyright in vehicle parts. A, which did not have a licence from B.L. to copy and sell spare parts, produced replacement exhaust pipes by copying the shape and dimensions of the original. B.L. commenced proceedings alleging infringement of copyright. The judge granted B.L. an injunction. The Court of Appeal upheld the decision.

Held, by the House of Lords that (1) for the purposes of the Copyright Act 1956 the manufacture of the exhaust pipes, although achieved by indirect copying, amounted to an infringement by A of B.L.'s copyright in the drawings (L. B. (Plastics) v Swish Products [1979] F.S.R. 145 followed); (2) allowing the appeal, that car owners had an inherent right to repair their cars in the most economical way possible and to have means to a free market in spare parts, and B.L. was not entitled to derogate from or interfere with that right by asserting their copyright (Browne v Flower [1911] 1 Ch. 219 and O'Cedar v Slough Trading Co [1927] 2 K.B. 123 applied).

Designers Guild Ltd v. Russell Williams (Textiles) Ltd House of Lords, [2001] F.S.R. 11

Decided on November 23, 2000.

COPYRIGHT INFRINGEMENT : 2 STAGE TEST

This was an appeal from the decision of the Court of Appeal [FN2] allowing the defendant's appeal and holding that the defendant's fabric design "Marguerite" did not infringe the copyright in the claimant's artistic work from which its fabric "Ixia" was made. At trial, the defendants had denied copying but the judge came to the conclusion based on the similarities between the two designs that the defendant's denials were false and that copying had occurred. On the question whether a substantial part had been copied, the judge held that it was the combination of the flowers and the stripes, the way in which they related to each other, the way in which they were painted and the way in which there was a "resist" effect which made the overall combination amount to the copying of a substantial part. On appeal to the Court of Appeal, the defendant accepted that it could not challenge the judge's finding that copying had occurred but argued that neither the whole nor a substantial part of the claimant's original painting had been taken by the defendant and that the similarities that were present were not sufficient as a matter of law to constitute the taking of a substantial part. The Court of Appeal, having analysed the two designs and considered the similarities and the differences, came to the conclusion that what had been copied was either the idea that was embodied in the claimant's work or that the same techniques had produced a similar visual effect. It, therefore, reversed the judge's finding that a substantial part of the copyright work had been copied. The claimant appealed.

Held, allowing the appeal and restoring the judge's order:

(per Lord Millett) The first step in an action for infringement of artistic copyright was to identify those features which the claimant alleged had been copied from the copyright work. The court undertook a visual comparison noting the similarities and the differences in order to decide whether the particular similarities relied upon were sufficiently close, numerous or extensive to be more likely the result of copying than of coincidence. It was at this stage that similarities might be disregarded because they were commonplace, unoriginal or consisted of general ideas. Once a finding of copying had been made, the question whether all or a substantial part had been taken arose. The pirated part had to be considered on its own and its importance to the copyright work assessed. There was no need to look at the infringing work for this purpose. (para. 39)

Ladbroke (Football) Ltd v. William Hill (Football) Ltd [1964] 1 W.L.R. 273, HL, referred to.

H6 (2) (per Lord Hoffmann, Lord Millett and Lord Scott of Foscote) When considering whether the features which were found to have been copied formed a substantial part of the claimant's work, it was not a relevant exercise to revisit the question whether the defendant's work looked like that of the claimant. When the question of substantiality was under consideration, it was no longer relevant to examine in what respects the two designs were different. (paras 18, 21, 42 and 65)

H7 (3) (per Lord Millett) While the copied features had to be a substantial part of the copyright work, they need not form a substantial part of the defendant's work. The overall appearance of the defendant's work might be very different from the copyright work, but it did not thereby follow that the defendant's work did not infringe the claimant's copyright. (para. 38)

H8 (4) (per Lord Scott of Foscote) This was a case of altered copying. In such a case a useful test to determine whether an altered copy constituted an infringement was: "Had the infringer incorporated a substantial part of the independent skill and labour, etc., contributed by the original author in creating the copyright work?" [FN5] (para. 64)

(per Lord Scott of Foscote) The question whether the copying constituted an infringement did raise a question of substantiality, but this was a question which had to be determined by comparing "Marguerite" as a whole with "Ixia" as a whole. The question to be answered was: did "Marguerite" incorporate a substantial part of the *115 skill and labour expended by the designer of "Ixia" in producing "Ixia"? (paras 70 and 75)

(per Lord Hoffmann) The cases in which the distinction between ideas and the expression of ideas had been given effect supported two distinct propositions. The first was that a copyright work might express certain ideas, which were not protected because they had no connection with the literary, dramatic, musical or artistic nature of the work. The second was that certain ideas expressed by a copyright work might not be protected because although they were ideas of a literary, dramatic or artistic nature they were not original or were so commonplace as not to form a substantial part of the work. (para. 25)

Because the judge had based his finding of copying largely on the similarities between the two designs, it almost inevitably followed that what had been copied amounted to a substantial part of the claimant's work. (paras 6, 31 and 67)

H12 (8) By analysing individual features of the two designs and highlighting certain dissimilarities, the Court of Appeal failed to give effect to the judge's conclusion (which had not been challenged before it) that the similarities between the two designs were so marked as to warrant a finding that one had been copied from the other. (paras 6, 22 and 31)

H13 (9) The Court of Appeal had erred in dissecting the claimant's design and comparing it with the defendant's design. This ignored substantial parts of the judge's findings on what had been copied and dealt with the copied features piece-meal instead of considering their cumulative effect. (paras 6, 19, 31 and 43). It was not open to the Court of Appeal to embark on the issue of substantiality afresh unless the judge had misdirected himself. As the judge had not misdirected himself, there was no ground for interfering with his conclusion. (paras 6, 29, 31 and 78)

Hyde Park Residence Ltd v Yelland (CA) Court of Appeal, [2000] R.P.C. 604

Decided on 10 February 2000

FAIR USE

H, a security company controlled by Al Fayed, appealed against the refusal of its claim ([1999] E.M.L.R. 654, [1999] 4 C.L. 404) for infringement of copyright and a finding that the respondent newspapers, which had obtained and published H's photographs without its permission, of Diana, Princess of Wales and Dodi Al-Fayed the day before their fatal accident, had a bona fide defence based on fair dealing or public interest. H contended that (1) Y had intended the use of the photographs to vilify AF, not to report current events, and (2) the Copyright, Designs and Patents Act 1988 did not provide a defence of public interest to an action for infringement of copyright.

Summary: Held, allowing the appeal, that applying the objective test of the standards of the fair minded and honest person, the defence of fair dealing could not succeed. The court had inherent jurisdiction to refuse to enforce copyright in circumstances where it would otherwise offend against the policy of the law, Lion Laboratories v Evans [1985] Q.B. 526, considered. The circumstances had to derive from the work itself, and not from the ownership of the copyright. Enforcement would be refused in the case of work that was, inter alia, immoral, contrary to family life or injurious to public health or safety, or incited acts that tended toward such conduct. Although the stills were arguably of public interest, publication was unnecessary, as the information they contained could have been conveyed in a way that did not infringe copyright.

Ashdown v. Telegraph Group Ltd

In the High Court of Justice—Chancery Division, (2001) R.P.C. 3 4

Decided on January 11, 2001

FAIR USE

Copyright—Political leader's diary extract leaked to defendant—Extract published in defendant's newspaper—Whether fair dealing—Whether criticism or review—Whether for the purpose of reporting current events—Whether defence of public interest—Effect of Article 10 of European Human Rights Convention (right to freedom of expression) on interpretation of defences.

H3 The claimant was a member of Parliament and the former leader of the Liberal Democrats. On October 21, 1997, he attended a meeting with the Prime Minister and others and later dictated a minute of that meeting. Two copies were made, one was added to his diary and other records in his safe, the other was read by a very small number of the claimant's closest advisers and then shredded. The claimant had always regarded his diaries as confidential.

In November 1999 the BBC broadcast an interview with the claimant and he referred to his diaries and the possibility of publishing them. He also referred to high level discussions he had had concerning a coalition cabinet comprising members of the Labour Party and of the Liberal Democrats. Shortly after the interview, the claimant's minute of the October 1997 meeting was disclosed to the political editor of the Sunday Telegraph by an individual "who felt that the public had been misled, that the secret [the coalition cabinet proposal] had been kept for too long and that the record should be 'set straight"'. The defendant published a number of articles in the Sunday Telegraph concerning "the secret plan to form [a] coalition" which incorporated substantial extracts of the claimant's minute both in direct quotation and in paraphrase. The points made by the writers in the articles were that the minute confirmed that the Prime Minister had seriously intended to form a coalition cabinet notwithstanding the large majority enjoyed by the Labour Party in the May 1997 election; that this disclosure contradicted denials emanating from 10 Downing Street; that the co-operation extended to assisting the Liberal Democrats to win a pending bye-election with the Liberal Democrats toning down their criticism of the Government, and that had members *660 of the Labour Party known how far the Prime Minister had gone in the formation of a coalition cabinet, their opposition to voting reforms in the wake of the Jenkins Report would have been a full scale revolt.

The claimant sued for infringement of copyright and breach of confidence and sought summary judgment for infringement of copyright under CPR Part 24. The defendant did not dispute subsistence or ownership of copyright, but contended that it had arguable defences of fair dealing for the purpose of reporting current events and for the purpose of criticism and review of the ideas, doctrine, philosophy and events in the minutes and their political implications and under the rule of law preventing or restricting the enforcement of copyright on grounds of public interest. The defendant also contended that the right to freedom of expression came within the rule of law preserved by section 171(3) of the 1988 Act and that the principles laid down in Hyde Park Residence Ltd v. Yelland [FN2] in relation to the defence of public interest were not binding because the decision of the Court of Appeal had been given prior to the coming into force of the Human Rights Act 1998.

HELD, GRANTING SUMMARY JUDGMENT:

H7 (1) Copyright did not protect ideas, only the material form in which they were expressed. It was therefore a restriction on the freedom of expression to inhibit another from copying the method of expression used by the copyright owner even though there might be open to him many other methods of expression of the same idea. Intellectual property rights in general and copyright in particular constituted a restriction on the exercise of the right to freedom of expression and Article 10 of the ECHR was engaged. (para. 12)

It was not necessary to consider the facts of each individual case to determine whether the restriction imposed by the law of copyright went further than what was necessary in a democratic society. The provisions of the 1988 Act alone could and did satisfy the requirements of Article 10. The needs of a democratic society included the recognition and protection of private property. (paras 13-15)

Article 9 of the Berne Convention 1971 left it to the member states to provide by their own domestic legislation for the circumstances in which a copyright work might be reproduced by others. The terms of section 30 of the 1988 Act were evidently intended to implement the latitude afforded by the Convention. The United Kingdom was similarly entitled to a margin of appreciation in giving effect to the provisions of Article 10 of the ECHR in the field of intellectual property. (para. 14)

The balance between the rights of the copyright owner and those of the public had been struck by the legislative organ of the democratic state itself in the legislation it had enacted. There was no room for any further defences outside the code which established the particular species of intellectual property in *661 question. It was not open to an infringer to defend the proceedings on the basis that, although he could not make out any of the statutory defences, nevertheless the relief sought would be more than that which was necessary in a democratic society and this contrary to Article 10(2) of the ECHR. (para. 20). The defendant's articles were not criticising or reviewing the minute itself but the actions of the Prime Minister and the claimant in October 1997. It was not necessary for that purpose to copy the minute at all. The articles did not come within section 30(1) because the purpose of copying the work was not its criticism or review. (para. 24)

Whilst the defendant could establish an arguable case that in publishing the articles it was reporting current events, what it did was not fair dealing. The publication in the Sunday Telegraph competed with that which the claimant might otherwise have effected; there was clear evidence that the consideration which the claimant subsequently obtained for publication of his diary was substantially reduced by the publication of the articles in the Sunday Telegraph; the Minute had not been previously published and the defendant knew that it had been kept secret. (paras 25 and 27-31)

The Human Rights Act 1998 was not a reason for interpreting the Copyright, Designs and Patents Act 1988 any differently and previous decisions on the scope of section 171(3) of the 1988 Act remained binding. The defendant could not bring itself within any of the circumstances under which a court would refuse to enforce copyright as a matter of public policy. (paras 31 and 32)

Hubbard v Vosper
(CA) Court of Appeal, [1972] 1 All E.R. 1023

Decided on 19 November 1971

FAIR USE

The defence of "fair dealing" within the meaning of the Copyright Act 1956 s. 6(2), is not confined to criticising or reviewing a plaintiff's literary work, and may avail a defendant when he is criticising or reviewing the doctrine or philosophy underlying the plaintiff's work. V wrote a book which was highly critical of the cult of Scientology, and which contained substantial extracts from books about Scientology written by H. H sought an injunction for breach of copyright.

Summary: Held, that although the book was the subject of copyright, and the extracts substantial, V's treatment of both them and their underlying subject-matter could amount to "fair dealing" within s. 6(2) of the Copyright Act 1956, and publication should not be restrained by interlocutory injunction. (Donmar Productions v Bart (Note) [1967] 1 W.L.R. 740 not followed and Harman Pictures NV v Osborne.

John Richardson Computers Ltd v Flanders (No.2)
(Ch D) Chancery Division, (1993) F.S.R 497

Decided on 19 February 1993

INFRINGEMENT OF COMPUTER PROGRAMS

Whether a part of a program is substantial is to be decided by its quality rather than by its quantity. P and D2 were companies which produced and marketed computer programs for labelling and stock control for pharmacies. P claimed copyright in a program written for BBC computers and alleged that Ds' program written for IBM compatible computers was an infringement of that copyright. R had written the first version of P's program in

1981. R then engaged two independent contractors, W and H, to refine and improve the program. R and W had assigned their rights in the program to P. In 1983 D1 had been employed as a programmer by P to improve and maintain the program. D1 subsequently worked as a consultant to P. P was requested to convert the Irish version of P's program for use on an IBM compatible computer. P declined to do so but put the third party in contact with D1. D1 produced a program for Ireland and then modified the program for sale in the UK. P became aware of the program and commenced proceedings. During the course of proceedings D1 took an assignment of copyright from H. D disputed that the copyright in any parts of the program written by W, H and D1 during the consultancy belonged to P. On infringement, P conceded that no substantial part of the source code of P's program had been copied but contended that the Ds had taken the general scheme of P's program.

Held, finding P's program infringed in limited respects, that (1) P was the legal owner of any copyright which had belonged to W and H. As H was re-writing and improving a program the copyright in which belonged to R, H held any copyright on trust for R (Massine v de Basil (1936-45) M.C.C. 223 applied); (2) an assignment of the same copyright by H to D1 extended only to the bare legal title to the copyright. At the date of the assignment the action had been commenced and D1 had notice of P's claim. Accordingly D1 held the copyright subject to P's prior equitable interest; (3) all work undertaken by D1 during the consultancy period, in so far as it attracted separate copyright, was held by D1 on trust for P; (4) it should first be decided whether P's program as a whole was entitled to copyright, and then whether any similarity attributable to copying which was to be found in D1's program amounted to the copying of a substantial part of P's program. Consideration of the substantiality of any copying was not restricted to the text of the code. Nor should consideration be limited to the "structure and organisation" of the program, since this imported an unacceptable degree of uncertainty because it was unclear at what level of abstraction the "structure and organisation" was to be discerned (Ladbroke (Football) v William Hill (Football) [1964] 1 W.L.R. 273 applied); (5) a screen display was a product of a program, not the program itself. A screen display was not itself a literary work which would entitle it to copyright protection and was only to be relied upon to the extent that it demonstrated the context of the underlying program in which the relevant copyright subsisted (Thrustcode v WW Computing [1983] F.S.R. 502 referred to); (6) although D1 did not have access to a copy of P's program during the period when he was writing his program he would have remembered all of the main routines of P's program. The evidence did not establish deliberate copying of P's program by D1 but it was possible that he had, unconsciously or unintentionally, made use of his knowledge of P's program in a way that amounted to copying; and (7) the question whether a part was substantial was to be decided by its quality rather than by its quantity. It was necessary to take into account such considerations as originality and the distinction between idea and expression in assessing the quality, and hence the substantiality, of any part which is said to have been copied.

Norowzian v Arks Ltd (No.2) (CA) Court of Appeal, [2000] F.S.R. 363

Decided on 4 November 1999

WHETHER FILM A DRAMATIC WORK ?

N, a film maker, made a short musical film entitled "Joy", making extensive use of a cinematographic editing technique called jump cutting, which made an actor appear to dance in a way which was in reality impossible. N sent "Joy" to A, an advertising agency, which produced another film called "Anticipation", employing similar editing techniques, but with a different actor and substantially different subject matter. "Anticipation" was subsequently used in an advertisement and N claimed breach of copyright. At first instance it was held ([1999] E.M.L.R. 67, [1998] C.L.Y. 3417) that a film was not capable of being a "dramatic work" under the Copyright, Designs and Patents Act 1988 s. 1, but that in any case there had been no substantial copying and the admitted similarities in style and technique did not amount to breach of copyright. N appealed.

Summary: Held, dismissing the appeal, that A's film did not substantially copy the film made by N. At most it could be said that there was a striking similarity of techniques employed by the film makers but the subject matter of each film was different. However, the judge had been wrong to conclude that a film could not be a dramatic work under the Act. A film fell within the ordinary definition of a dramatic work, which included any work of action capable of being performed before an audience.

Ravenscroft v. Herbert and New English Library (Ch D) Chancery Division, [1980] R.P.C. 193

25 Decided on July 1979,

INFRINGEMENT OF LITERARY WORK

The plaintiff's claim was in respect of infringement of copyright in a literary work. The plaintiff's work was a book of non-fiction. It detailed the history of a spear - the spear which forms part of the Hapsburg treasure in the Hofburg Museum, Vienna. The plaintiff had traced this spear back through time and had identified it as the spear which pierced the side of Christ at the crucifixion. Further he had identified it as the spear used by many legendary historical personages. Further he had identified it as the source of inspiration for Hitler's Germany. The plaintiff had researched the history of the spear by orthodox methods and by using mystical meditation. The first defendant was an author of works of fiction. He had read the plaintiff's book and had been fascinated by it. He thought it would make a good basis for a novel. He wrote a work of fiction about the post-war fate of the spear. The book was about a neo-Hitler group, secret agents, terrorists and the like. The book was divided into sections. At the beginning of each was a prologue. The prologues recounted the story of the Hofburg spear from the Crucifixion to the end of the 1939 war.

The first defendant admitted using the plaintiff's work as a source but denied copying such a substantial part as to amount to infringement of copyright. He said that he had used only the historical facts contained in the plaintiff's work, and that his purpose in so doing was to give an air of credence to his novel. The second defendants were the publishers of the first defendant's novel. They had a contract with the first defendant which obliged them to publish. The second defendants pleaded that even if the work was an infringement of copyright, they were not liable for damages for conversion since they had reasonable grounds for believing it was not an infringement. The plaintiff claimed that in any event the first defendant was jointly liable with the second defendants for the latter's conversion since, because of the publishing contract, he was a joint tortfeasor. In the plaintiff's claim for damages there was a claim under section 17(3) of the Copyright Act. He claimed that the defendants' activities amounted to a flagrant breach of his rights. There had been an order for a speedy trial and that the affidavits filed in interlocutory proceedings should stand as pleadings.

COURT OBSERVED THE FOLLOWING

Copyright protects the skill and labour employed by an author in the production of his work. That skill and labour embraces not only the language originated and used by the author but such skill and labour as he employed in selection and compilation.

An author is not entitled, under the guise of producing an original work, to reproduce arguments and illustrations of another author so as to appropriate to himself the literary labour of that author.

The law of copyright will probably allow a wider use to be made of a historical work than of a novel.

Summary: Held, there had been a substantial copying in writing the prologue, there was language copying and the same characters, incidents and interpretation of events; (2) there was no "flagrant" infringement; (3) the publisher was liable as joint tortfeasor; (4) the infringing part of the defendant's work amounted to 4 per cent but the value was 15 per cent of the whole, and the quantum of damages was assessed accordingly.

British Horseracing Board Ltd v. William Hill Organisation Ltd
European Court of Justice, (2005) RPC 13

9th November 2004

DATABASE RIGHTS

In 2001, the British Horseracing Board ("BHB") succeeded in its High Court action in the UK against the bookmakers William Hill for infringement of database rights in its horseracing fixture list. The information published by William Hill as part of its online betting service concerned the following aspects of the BHB database: the identity of horses running, the date, the time and/or the identity of the race and the name of the racecourse. This was the first case to come before the English courts on the new right afforded to databases by the Database Directive.

On appeal, the English Court of Appeal referred to the ECJ a series of questions on the legal interpretation of the Database Directive. The ECJ made the following rulings in respect of the William Hill case as well as three other cases with similar facts in Greece, Finland and Sweden involving Fixtures Marketing which, on behalf of the UK football leagues, licences fixture lists outside the UK.

ECJ'S RULINGS ON THE SCOPE OF PROTECTION

The expression "investment in...the obtaining...of the contents" of a database is limited to the resources used to "seek out existing independent materials and collect them in [a] database" ; it does not mean the resources used for the creation of materials which make up a database.

The expression "investment in...the verification...of the contents" of a database refers to the resources used to ensure the "reliability of the information contained in [a] database, to monitor the accuracy of the materials collected when the database was created and during its operation" ;it does not refer to resources used for verification of materials when they are created and subsequently collected in a database.

The terms "extraction" and "re-utilisation" refer to "any unauthorised act of appropriation and distribution to the public of the whole or a part of the contents of a database". Direct access to the database is not necessary.

The expression "substantial part, evaluated... quantitatively, of the contents of [a] database" refers to the "volume" of data extracted and/or re-utilised and must be "assessed in relation to the total volume of the contents of the database".

The expression "substantial part, evaluated...qualitatively, of the contents of [a] database" refers to the "scale of the investment in the obtaining, verification or presentation of the contents of the subject of the act of extraction and/or re-utilisation regardless of whether that subject represents a quantitatively substantial part of the general contents of thedatabase".

"Repeated and systematic extraction and/or re-utilisation of insubstantial parts of the contents of [a] database" which, pursuant to Article 7(5) of the Database Directive, are not permitted if such acts "conflict with a normal exploitation of [a] database or which unreasonably prejudice the legitimate interests of the maker of the database", refers to acts the cumulative effect of which is to reconstitute/make available to the public the whole/a substantial part of the contents of a database thereby seriously prejudicing the investment by the maker of the database.

The ECJ ruled that BHB's database did not qualify for protection afforded by the database right. This was because it found that the "investment in obtaining...the contents" of the database had to be investment in seeking out existing independent materials, and not investment in resources which create the contents of the database. The ECJ decided that BHB's investment went into the creation of the racing lists and checking information about the race and its entrants. This was part of BHB's principal activity of organising horse racing and took place before the BHB database was created.

The ECJ concluded that William Hill's acts did constitute 'extraction or re-utilisation' and it did not matter that this had been effected indirectly. The ECJ then went on to consider whether or not this 'extraction or re-utilisation' was of a substantial part, evaluated qualitatively or quantitatively, of the contents of the database. On the facts, the ECJ held that the materials on William Hill's websites derived from the BHB database represented only a very small proportion of the whole of the BHB database, and therefore those materials "[did] not constitute a substantial part, evaluated quantitatively". The ECJ also held that the material was not a substantial part, evaluated qualitatively, as that referred to the scale of the investment in the obtaining, verification or presentation of the material which had been extracted or re-utilised. The ECJ held that BHB had not invested in such data beyond investment in the resources required for its creation.

The ECJ confirmed that William Hill's acts did amount to a repeated and systematic extraction or re-utilisation of unsubstantial parts. However, it was not prepared to hold that this prejudiced the interests of BHB, which would have provided BHB the protection given by Article 7(5) of the Directive. This was because the ECJ held that Article 7(5) only applied if the acts concerned had the cumulative effect of reconstituting the whole or a substantial part of the database. The ECJ decided on the facts that there was no possibility that, cumulatively, William Hill could reconstitute and make available to the public the whole or a substantial part of the BHB database. The judgement clearly has specific implications for the horse racing and football industries who generate significant revenue from their data licensing activities. In addition, database owners will need to structure their database licensing arrangements to ensure that there is demonstrable investment in the gathering, checking and presentation of the database content, independent of the investment made to create the database in the first place.

IPC Media Ltd v. Highbury – SPL Publishing Ltd Chancery Division, [2004] EWHC 2985

Decided on 21st February 2004

INFRINGEMENT OF ARTISTIC WORKS

The claimant in this action was a well known publisher of a monthly home design and decorating magazine entitled 'Ideal Home'. The defendant published 'Home'; a competing monthly magazine. The claimant was unsuccessful in its complaint that the outer covers and various parts of the internal sections of certain 'Home' issues infringed the copyright in earlier issues of 'Ideal Home'. The claimant produced a list of features from the accused 'Home' magazines which it alleged were similar to and copied from equivalents in the 'Ideal Home' magazines and which, taken together, represented a reproduction of a substantial part of the claimant's copyright works. It was alleged that each of these 'Home' magazines infringed the copyright in all the equivalent 'Ideal Home' issues.

The defendant denied copying any of the claimant's works. It argued that the similarities relied on were trivial and did not raise an inference of copying. The defendant further contended that the similarities which did exist between the magazines were due to the use of design tricks and concepts which were common in the field. The court was critical of the way the claimant drafted its pleadings. The claimant appeared to be asserting copyright in the 'Design Elements' of the magazines, such as design, subject matter, theme and presentational style, rather that the covers and articles themselves. Laddie J. said that this was an illegitimate method as "[c]opyright is not a legal millefeuille with layers of different artistic copyrights". Although a substantial part of the copyright may consists of the Design Elements so that unlicensed copying of them would amount to copyright infringement, there is only one artistic copyright asserted for each cover and article, namely that in the cover or article as a whole.

This was a case of artistic copyright and therefore the claimant could not complain about words used by the defendant on the 'Home' magazines as these would be protected by literary copyright. However, Laddie J. was persuaded by the claimant's argument that if the defendant copied any words from 'Ideal Home' there was an increased chance that it copied other features as well. Nevertheless, the court held that the claimant had failed to make a credible case of copying. The similarities between the two magazines were minor and at too a high level of generality to amount to infringement. Instead, it was held that this was a case of similarity by excision whereby the court is invited by a claimant to concentrate on features of his work similar to the alleged infringement and lose sight of the differences, which can be just as important, in deciding whether copying has taken place.

Sawkins v Hyperion Records Ltd (Ch D) Chancery Division, [2005] R.P.C. 4

Decided on 1st July 2004

INFRINGEMENT OF MUSICAL WORKS

S claimed that H had infringed his copyright by recording certain musical works. S was a leading expert on the music of a seventeenth century French baroque composer, L. Most of L's original scores had been lost, and S had spent a great deal of his career researching and studying printed manuscripts held in various libraries around the world. In 2000 S started discussions with a conductor with a view to recording four works by L. S prepared new versions of the works. This involved him piecing together the scores from the various sources, including deciding which of the often many different versions of the piece to use; adding missing notes or amending notes where they were incorrect; figuring a bass line; and dividing the full score into parts for the choir and each member of the orchestra. S registered the works with the Performing Rights Society and asserted copyright. The recording was carried out by H but was released on compact disc without acknowledging S as copyright holder. S claimed infringement of copyright but H contended that the only copyright was in the original author, L, and had lapsed due to the passage of time, and that S had done nothing sufficient to assume ownership of the work.

Held, giving judgment for S, that S did have copyright in the work, which had been infringed by H. To establish copyright for work based on an existing piece, the test was whether the new version was "sufficiently original in terms of the skill and labour used to produce it", which involved looking at the piece overall and not merely carrying out "a note for note comparison ", Austin v Columbia Gramophone Co (1923) 67 S.J. 790 applied. It was not necessary for the new version to be "unique". The recorded performance of the works could not have been carried out without S's input, which involved far more than simply copying. S, therefore, did have copyright in the works, and their use in the recording without acknowledgement infringed that right.

Football Association Premier League Ltd v Panini UK Ltd Court of Appeal (Civil Division), [2004] F.S.R. 1

Decided on 11th July 2003

INCIDENTAL INCLUSION

P appealed against a decision ([2002] EWHC 2779, [2003] E.C.D.R. 21) restraining it from selling collectable stickers of well known footballers wearing team strips showing the premier league logo or the logo of a premier league club. P distributed an unofficial football sticker album and a sticker collection which included players from the premier league clubs. F, acting on behalf of the clubs, had granted exclusive rights to its licensee, T, to use and reproduce the official team logos in the production of stickers and albums. F, T and the clubs brought proceedings claiming copyright ownership of the league and club logos and sought an injunction to restrain P's alleged infringement. P relied in its defence on the Copyright, Designs and Patents Act 1988 s. 31, which permitted incidental inclusion of a copyright work in another work. The court of first instance held that the use of the logos in the sticker photographs infringed copyright because it was not incidental, meaning casual or of secondary importance, and that the inclusion of the logos as part of the strip was integral to the depiction of the footballer in his current strip.

Summary: Held, dismissing the appeal, that what was incidental under s. 31 depended on all the circumstances of a case. "Incidental" did not mean only unintentional or non-deliberate inclusion, and the question of whether the making of the image as it appeared on the sticker or in the album was, by virtue of s. 31(1), not an infringement of copyright had to be answered by considering the circumstances in which the relevant artistic work, which in the instant case was the image of the player as it appeared on the sticker or in the album, was created. There was no necessary dichotomy between "incidental " and "integral". Where an artistic work in which copyright subsisted appeared in a photograph because it was part of the setting in which the photographer found his subject, it could properly be said to be an integral part of that photograph. In order to test whether the use of one work in another was incidental, it was proper to ask why it had been included in the other, considering both commercial and aesthetic reasons. Applying that test, it was evident that the use of the team and premier league logos in the stickers was not incidental. In the absence of full argument on the issue, it appeared that the defence under s. 31(1) would, in any event, not apply to the albums sold by P since they were arguably literary works, to which the defence did not apply.

CCH Canadian Ltd. v. Law Society of Upper Canada Supreme Court of Canada, 2004 SCC 13

Decided on 4th March 2004

ON APPEAL FROM THE FEDERAL COURT OF APPEAL ORIGINALITY, SCOPE OF FAIR USE

The appellant Law Society maintains and operates the Great Library at Osgoode Hall in Toronto, a reference and research library with one of the largest collections of legal materials in Canada. The Great Library provides a request-based photocopy service for Law Society members, the judiciary and other authorized researchers. Under this "custom photocopy service", legal materials are reproduced by Great Library staff and delivered in person, by mail or by facsimile transmission to requesters. The Law Society also maintains self-service photocopiers in the Great Library for use by its patrons. In 1993, the respondent publishers commenced copyright infringement actions against the Law Society, seeking a declaration of subsistence and ownership of copyright in specific works and a declaration that the Law Society had infringed copyright when the Great Library reproduced a copy of each of the works. The publishers also sought a permanent injunction prohibiting the Law Society from reproducing these works as well as any other works that they published. The Law Society denied liability and counterclaimed for a declaration that copyright is not infringed when a single copy of a reported decision, case summary, statute, regulation or a limited selection of text from a treatise is made by the Great Library staff, or one of its patrons on a self-service copier, for the purpose of research. The Federal Court, Trial Division allowed the publishers' action in part, finding that the Law Society had infringed copyright in certain works; it dismissed the Law Society's counterclaim. The Federal Court of Appeal allowed the publishers' appeal in part, holding that all of the works were original and therefore covered by copyright. It dismissed the Law Society's cross-appeal.

Held: The appeal should be allowed and the cross-appeal dismissed. The Law Society does not infringe copyright when a single copy of a reported decision, case summary, statute, regulation or limited selection of text from a treatise is made by the Great Library in accordance with its access policy. Moreover, the Law Society does not authorize copyright infringement by maintaining a photocopier in the Great Library and posting a notice warning that it will not be responsible for any copies made in infringement of copyright.

The headnotes, case summary, topical index and compilation of reported judicial decisions are all original works in which copyright subsists. An "original" work under the *Copyright Act* is one that originates from an author and is not copied from another work. In addition, an original work must be the product of an author's exercise of skill and judgment. The exercise of skill and judgment required to produce the work must not be so trivial that it could be characterized as a purely mechanical exercise. While creative works will by definition be "original" and covered by copyright, creativity is not required to make a work "original". This conclusion is supported by the plain meaning of "original", the history of copyright law, recent jurisprudence, the purpose of the *Copyright Act* and the fact that this constitutes a workable yet fair standard. While the reported judicial decisions, when properly understood as a compilation of the headnote and the accompanying edited judicial reasons, are "original" works covered by copyright, the judicial reasons in and of themselves, without the headnotes, are not original works in which the publishers could claim copyright.

Under s. 29 of the *Copyright Act*, fair dealing for the purpose of research or private study does not infringe copyright. "Research" must be given a large and liberal interpretation in order to ensure that users' rights are not unduly constrained, and is not limited to non-commercial or private contexts. Lawyers carrying on the business of law for profit are conducting research within the meaning of s. 29. The following factors help determine whether a dealing is fair: the purpose of the dealing, the character of the dealing, the amount of the dealing, the nature of the work, available alternatives to the dealing, and the effect of the dealing on the work. Here, the Law Society's dealings with the publishers' works through its custom photocopy service were research-based and fair. The access policy places appropriate limits on the type of copying that the Law Society will do. If a request does not appear to be for the purpose of research, criticism, review or private study, the copy will not be made. If a question arises as to whether the stated purpose is legitimate, the reference librarian will review the matter. The access policy limits the amount of work that will be copied, and the reference librarian reviews requests that exceed what might typically be considered reasonable and has the right to refuse to fulfill a request.

The Law Society did not authorize copyright infringement by providing self-service photocopiers for use by its patrons in the Great Library. While authorization can be inferred from acts that are less than direct and positive, a person does not authorize infringement by authorizing the mere use of equipment that could be used to infringe copyright. Courts should presume that a person who authorizes an activity does so only so far as it is in accordance with the law. This presumption may be rebutted if it is shown that a certain relationship or degree of control existed between the alleged authorizer and the persons who committed the copyright infringement. Here, there was no evidence that the copiers had been used in a manner that was not consistent with copyright law. Moreover, the Law Society's posting of a notice warning that it will not be responsible for any copies made in infringement of copyright does not constitute an express acknowledgement that the copiers will be used in an illegal manner. Finally, even if there were evidence of the copiers having been used to infringe copyright, the Law Society lacks sufficient control over the Great Library's patrons to permit the conclusion that it sanctioned, approved or countenanced the infringement.

There was no secondary infringement by the Law Society. The Law Society's fax transmissions of copies of the respondent publishers' works to lawyers in Ontario were not communications to the public. While a series of repeated fax transmissions of the same work to numerous different recipients might constitute communication to the public in infringement of copyright, there was no evidence of this type of transmission having occurred in this case. Nor did the Law Society infringe copyright by selling copies of the publishers' works. Absent primary infringement, there can be no secondary infringement. Finally, while it is not necessary to decide the point, the Great Library qualifies for the library exemption.

Important U.S. Cases

Feist Publications, Inc. v. Rural Telephone Service Co., US Supreme Court, 499 U.S. 340 (1991)

Decided on March 27, 1991

Certiorari to The United States Court Of Appeals For The Tenth Circuit.

CONCEPT OF ORIGINALITY, RELEVANCE OF THE SWEAT OF THE BROW

Respondent Rural Telephone Service Company is a certified public utility providing telephone service to several communities in Kansas. Pursuant to state regulation, Rural publishes a typical telephone directory, consisting of white pages and yellow pages. It obtains data for the directory from subscribers, who must provide their names and addresses to obtain telephone service. Petitioner Feist Publications, Inc., is a publishing company that specializes in area-wide telephone directories covering a much larger geographic range than directories such as Rural's. When Rural refused to license its white pages listings to Feist for a directory covering 11 different telephone service areas, Feist extracted the listings it needed from Rural's directory without Rural's consent. Although Feist altered many of Rural's listings, several were identical to listings in Rural's white pages. The District Court granted summary judgment to Rural in its copyright infringement suit, holding that telephone directories are copyrightable. The Court of Appeals affirmed.

Held: Rural's white pages are not entitled to copyright, and therefore Feist's use of them does not constitute infringement. Pp. 344-364(a) Article I, ? 8, cl. 8, of the Constitution mandates originality as a prerequisite for copyright protection. The constitutional requirement necessitates independent creation plus a modicum of creativity. Since facts do not owe their origin to an act of authorship, they are not original and, thus, are not copyrightable. Although a compilation of facts may possess the requisite originality because the author typically chooses which facts to include, in what order to place them, and how to arrange the data so that readers may use them effectively, copyright protection extends only to those components of the work that are original to the author, not to the facts themselves. This fact/ expression dichotomy severely limits the scope of protection in fact-based works. Pp. 344-351.

(b) The Copyright Act of 1976 and its predecessor, the Copyright Act of 1909, leave no doubt that originality is the touchstone of copyright protection in directories and other fact-based works. The 1976 Act explains that copyright extends to "original works of authorship," 17 U.S.C. ? 102(a), and that there can be no copyright in facts, ? 102(b). A compilation is not copyrightable *per se*, but is copyrightable only if its facts have been "selected, coordinated, or arranged *in such a way* that the resulting work as a whole constitutes an original work of authorship." ? 101 (emphasis added). Thus, the statute envisions that some ways of selecting, coordinating, and arranging data are not sufficiently original to trigger copyright protection. Even a compilation that is copyrightable receives only limited protection, for the copyright does not extend to facts contained in the compilation. ? 103(b). Lower courts that adopted a "sweat of the brow" or "industrious collection" test - which extended a compilation's copyright protection beyond selection and arrangement to the facts themselves - misconstrued the 1909 Act and eschewed the fundamental axiom of copyright law that no one may copyright facts or ideas. Pp. 351-361.

(c) Rural's white pages do not meet the constitutional or statutory requirements for copyright protection. While Rural has a valid copyright in the directory as a whole because it contains some forward text and some original material in the yellow pages, there is nothing original in Rural's white pages. The raw data are uncopyrightable facts, and the way in which Rural selected, coordinated, and arranged those facts is not original in any way. Rural's selection of listings, subscribers' names, towns, and telephone numbers could not be more obvious and lacks the modicum of creativity necessary to transform mere selection into copyrightable expression. In fact, it is plausible to conclude that Rural did not truly "select" to publish its subscribers' names and telephone numbers, since it was required to do so by state law. Moreover, there is nothing remotely creative about arranging names alphabetically in a white pages directory. It is an age-old practice, firmly rooted in tradition and so commonplace that it has come to be expected as a matter of course. Pp. 361-364.

Baker v. Selden
US Supreme Court, 101 U.S. 99 (1879)

Decided on January 19, 1880

APPEAL from the Circuit Court of the United States for the Southern District of Ohio.

IDEA EXPRESSION DICHOTOMY

Charles Selden, in the year 1859 took the requisite steps for obtaining the copyright of a book, entitled "Selden's Condensed Ledger, or Book-keeping Simplified," the object of which was to exhibit and explain a peculiar system of book-keeping. The bill of complaint was filed against the defendant, Baker, for an alleged infringement of these copyrights. The latter contends that the matter alleged to be infringed is not a lawful subject of copyright.

The book of which the complainant claims the copyright consists of an introductory essay explaining the system of book-keeping referred to, to which are annexed certain forms or blanks, consisting of ruled lines, and headings, illustrating the system and showing how it is to be used and carried out in practice. This system effects the same results as book-keeping by double entry; but, by a peculiar arrangement of columns and headings, presents the entire operation, of a day, a week, or a month, on a single page, or on two pages facing each other, in an account-book. The defendant uses a similar plan so far as results are concerned; but makes a different arrangement of the columns, and uses different headings.

If Selden had the exclusive right to the use of the system explained in his book, it would be difficult to contend that the defendant does not infringe it, notwithstanding the difference in his form of arrangement; but, if it be assumed that the system is open to public use, it seems to be equally difficult to contend that the books made and sold by the defendant are a violation of the copyright of the complainant's book, considered merely as a book explanatory of the system.

Where the truths of a science or the methods of an art are the common property of the whole world, any author has the right to express the one, or explain and use the other, in his own way. As an author, Selden explained the system in a particular way. It may be conceded that Baker makes and uses account-books arranged on substantially the same system; but the proof fails to show that he has violated the copyright of Selden's book, regarding the latter merely as an explanatory work; or that he has infringed Selden's right in any way, unless the latter became entitled to an exclusive right in the system.

The evidence of the complainant is principally directed to the object of showing that Baker uses the same system as that which is explained and illustrated in Selden's books. It becomes important, therefore, to determine whether, in obtaining the copyright of his books, he secured the exclusive right to the use of the system or method of book-keeping which the said books are intended to illustrate and explain.

It is contended that he has secured such exclusive right, because no one can use the system without using substantially the same ruled lines and headings which he appended to his books in illustration of it. In other words, it is contended that the ruled lines and headings, given to illustrate the system, are a part of the book, and, as such, are secured by the copyright; and that no one can make or use similar ruled lines and headings, or ruled lines and headings made and arranged on substantially the same system, without violating the copyright. And this is really the question to be decided in this case. Stated in another form, the question is, whether the exclusive property in a system of book-keeping can be claimed, under the law of copyright, by means of a book in which that system is explained? The complainant's bill, and the case made under it, are based on the hypothesis that it can be.

There is no doubt that a work on the subject of book-keeping, though only explanatory of well-known systems, may be the subject of a copyright; but, then, it is claimed only as a book. Such a book may be explanatory either of old systems,or of an entirely new system; and, considered as a book, as the work of an author, conveying information on the subject of book-keeping, and containing detailed explanations of the art, it may be a very valuable acquisition to the practical knowledge of the community.

But there is a clear distinction between the book, as such, and the art which it is intended to illustrate. The mere statement of the proposition is so evident, that it requires hardly any argument to support it. The same distinction may be predicated of every other art as well as that of book-keeping. A treatise on the composition and use of medicines, be they old or new; on the construction and use of ploughs, or watches, or churns; or on the mixture and application of colors for painting or dyeing; or on the mode of drawing lines to produce the effect of perspective, would be the subject of copyright; but no one would contend that the copyright of the treatise would give the exclusive right to the art or manufacture described therein.

The copyright of the book, if not pirated from other works, would be valid without regard to the novelty, or want of novelty, of its subject matter. The novelty of the art or thing described or explained has nothing to do with the validity of the copyright.

To give to the author of the book an exclusive property in the art described therein, when no examination of its novelty has ever been officially made, would be a surprise and a fraud upon the public. That is the province of letters-patent, not of copyright. The claim to an invention or discovery of an art or manufacture must be subjected to the examination of the Patent Office before an exclusive right therein can be obtained; and it can only be secured by a patent from the government.

The difference between the two things, letters-patent and copyright, may be illustrated by reference to the subjects just enumerated. Take the case of medicines. Certain mixtures are found to be of great value in the healing art. If the discoverer writes and publishes a book on the subject (as regular physicians generally do), he gains no exclusive right to the manufacture and sale of the medicine; he gives that to the public. If he desires to acquire such exclusive right, he must obtain a patent for the mixture as a new art, manufacture, or composition of matter. He may copyright his book, if he pleases; but that only secures to him the exclusive right of printing and publishing his book. So of all other inventions or discoveries.

The copyright of a book on perspective, no matter how many drawings and illustrations it may contain, gives no exclusive right to the modes of drawing described, though they may never have been known or used before. By publishing the book, without getting a patent for the art, the latter is given to the public. The fact that the art described in the book by illustrations of lines and figures which are reproduced in practice in the application of the art, makes no difference. Those illustrations are the mere language employed by the author to convey his ideas more clearly. Had he used words of description instead of diagrams (which merely stand in the place of words), there could not be the slightest doubt that others, applying the art to practical use, might lawfully draw the lines and diagrams which were in the author's mind, and which he thus described by words in his book.

The copyright of a work on mathematical science cannot give to the author an exclusive right to the methods of operation which he propounds, or to the diagrams which he employs to explain this, so as to prevent an engineer from using this whenever occasion requires.

The very object of publishing a book on science or the useful arts is to communicate to the world the useful knowledge which it contains. But this object would be frustrated if the knowledge could not be used without incurring the guilt of piracy of the book. And where the art it teaches cannot be used without employing the methods and diagrams used to illustrate the book, or such as are similar to such methods and diagrams are to be considered as necessary incidents to the art, and given therewith to the public; not given for the purpose of publication in other works explanatory of the art, but for the purpose of practical application.

Of course, these observations are not intended to apply to ornamental designs, or pictorial illustrations addressed to the taste. Of these it may be said, that their form is their essence, and their object, the production of pleasure in their contemplation. This is their final end. They are as much the product of genius and the result of composition, as are the lines of the poet or the historian's period.

On the other hand, the teachings of science and the rules and methods of useful art have their final end in application and use; and this application and use are what the public derive from the publication of a book which teaches this. But as embodied and taught in a literary composition or book, their essence consists only in their statement. This alone is what is secured by the copyright. The use by another of the same methods of statement, whether in words or illustrations, in a book published for teaching the art, would undoubtedly be an infringement of the copyright.

Recurring to the case before us, we observe that Charles Selden, by his books, explained and described a peculiar system of book-keeping, and illustrated his method by means of ruled lines and blank columns, with proper headings on a page, or on successive pages. Now, whilst no one has a right to print or publish his book, or any material part thereof, as a book intended to convey instruction in the art, any person may practice and use the art itself which he has described and illustrated therein. The use of the art is a totally different thing from a publication of the book explaining it. The copyright of a book on book-keeping cannot secure the exclusive right to make, sell, and use account-books prepared upon the plan set forth in such book. Whether the art might or might not have been patented is a question which is not before us. It was not patented, and is open and free to the use of the public. And, of course, in using the art, the ruled lines and headings of accounts must necessarily be used as incident to it.

The plausibility of the claim put forward of ideas produced by the peculiar nature of the art described in the books which have been made the subject of copyright. In describing the art, the illustrations and diagrams employed happen to correspond more closely than usual with the actual work performed by the operator who uses the art. Those illustrations and diagrams consist of ruled lines and headings of accounts; and it is similar ruled lines and headings of accounts which, in the application of the art, the book-keeper makes with his pen, or the stationer with his press; whilst in most other cases the diagrams and illustrations can only be represented in concrete forms of wood, metal, stone, or some other physical embodiment.

But the principle is the same in all. The description of the art in a book, though entitled to the benefit of copyright, lays no foundation for an exclusive claim to the art itself. The object of the one is explanation; the object of the other is use. The former may be secured by copyright. The latter can only be secured, if it can be secured at all, by letters-patent.

The conclusion to which we have come, is that blank account-books are not the subject of copyright; and that the mere copyright of Selden's book did not confer upon him the exclusive right to make and use account-books, ruled and arranged as designated by him and described and illustrated in said book.

The decree of the Circuit Court must be reversed, and the cause remanded with instructions to dismiss the complainant's bill.

Computer Associates International, Inc. v. Altai, Inc.
U.S. Court of Appeals for 2nd Circuit, 982 F.2d 693, 23 USPQ2d 1241

Decided June 22, 1992

Appeal Against The Judgment Of United States District Court For Eastern District Of New York

INFRINGEMENT OF COMPUTER PROGRAMS: ABSTRACTION, FILTRATION, COMPARISON TEST

CA is a Delaware corporation, with its principal place of business in Garden City, New York. Altai is a Texas corporation, doing business primarily in Arlington, Texas. Both companies are in the computer software industry – designing, developing and marketing various types of computer programs.

DISCUSSION

While both parties originally appealed from different aspects of the district court's judgment, Altai has now abandoned its appellate claims. In particular, Altai has conceded liability for the copying of ADAPTER into OSCAR 3.4 and raises no challenge to the award of $364,444 in damages on that score. Thus, we address only CA's appeal from the district court's rulings that: (1) Altai was not liable for copyright infringement in developing OSCAR 3.5; and (2) in developing both OSCAR 3.4 and 3.5, Altai was not liable for misappropriating CA's trade secrets.

CA makes two arguments. First, CA contends that the district court applied an erroneous method for determining whether there exists substantial similarity between computer programs, and thus, erred in determining that OSCAR 3.5 did not infringe the copyrights held on the different versions of its CA-SCHEDULER program. CA asserts that the test applied by the district court failed to account sufficiently for a computer program's non-literal elements. Second, CA maintains that the district court erroneously concluded that its state law trade secret claims had been preempted by the federal copyright act, see 17 U.S.C. Section 301(a) . We shall address each argument in turn.

I. COPYRIGHT INFRINGEMENT

In any suit for copyright infringement, the plaintiff must establish its ownership of a valid copyright, and that the defendant copied the copyrighted work. See Novelty Textile Mills, Inc. v. Joan Fabrics Corp., 558 F.2d 1090, 1092 [195 USPQ 1] (2d Cir. 1977); see also 3 Melville B. Nimmer & David Nimmer, Nimmer on Copyright Section 13.01, at 13-4 (1991) (hereinafter "Nimmer"). The plaintiff may prove defendant's copying either by direct evidence or, as is most often the case, by showing that (1) the defendant had access to the plaintiff's copyrighted work and (2) that defendant's work is substantially similar to the plaintiff's copyrightable material. See Walker v. Time Life Films, Inc., 784 F.2d 44, 48 [228 USPQ 505] (2d Cir.), cert. denied, 476 U.S. 1159 (1986).

For the purpose of analysis, the district court assumed that Altai had access to the ADAPTER code when creating OSCAR 3.5. See Computer Associates, 775 F. Supp. at 558 . Thus, in determining whether Altai had unlawfully copied protected aspects of CA's ADAPTER, the district court narrowed its focus of inquiry to ascertaining whether Altai's OSCAR 3.5 was substantially similar to ADAPTER. Because we approve Judge Pratt's conclusions regarding substantial similarity, our analysis will proceed along the same assumption.

As a general matter, and to varying degrees, copyright protection extends beyond a literary work's strictly textual form to its non-literal components. As we have said, "[i]t is of course essential to any protection of literary property . . . that the right cannot be limited literally to the text, else a plagiarist would escape by immaterial variations." Nichols v. Universal Pictures Co., 45 F.2d 119, 121 [7 USPQ 84] (2d Cir. 1930) (L. Hand, J.), cert. denied, 282 U.S. 902 (1931). Thus, where "the fundamental essence or structure of one work is duplicated in an <23 USPQ2d 1249> other," 3Nimmer, Section 13.03 [A] [1], at 13-24 , courts have found copyright infringement. See, e.g., Horgan v. Macmillan, 789 F.2d 157, 162 [229 USPQ 684] (2d Cir. 1986) (recognizing that a book of photographs might infringe ballet choreography); Twentieth Century-Fox Film Corp. v. MCA, Inc., 715 F.2d 1327, 1329 [217 USPQ 611] (9th Cir. 1983) (motion picture and television series); Sid & Marty Krofft Television Productions, Inc. v. McDonald's Corp., 562 F.2d 1157, 1167 [196 USPQ 97] (9th Cir. 1977) (television commercial and television series); Sheldon v. Metro-Goldwyn Pictures Corp., 81 F.2d 49, 55 [28 USPQ 330] (2d Cir.), cert. denied, 298 U.S. 669 (1936) (play and motion picture); accord Stewart v. Abend,495 U.S. 207, 238 [14 USPQ2d 1614] (1990) (recognizing that motion picture may infringe copyright in book by using its "unique setting, characters, plot, and sequence of events"). This black letter proposition is the springboard for our discussion. <982 F.2d 702>

A. Copyright Protection for the Non-literal Elements of Computer Programs

It is now well settled that the literal elements of computer programs, i.e., their source and object codes, are the subject of copyright protection. See Whelan, 797 F.2d at 1233 (source and object code); CMS Software Design Sys., Inc. v. Info Designs, Inc., 785 F.2d 1246, 1249 [229 USPQ 311] (5th Cir. 1986) (source code); Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240, 1249 [219 USPQ 113] (3d Cir. 1983), cert. dismissed, 464 U.S. 1033 (1984) (source and object code);Williams Electronics, Inc. v. Artic Int'l, Inc., 685 F.2d 870, 876-77 [215 USPQ 405] (3d Cir. 1982) (object code). Here, as noted earlier, Altai admits having copied approximately 30% of the OSCAR 3.4 program from CA's ADAPTER source code, and does not challenge the district court's related finding of infringement.

In this case, the hotly contested issues surround OSCAR 3.5. As recounted above, OSCAR 3.5 is the product of Altai's carefully orchestrated rewrite of OSCAR 3.4. After the purge, none of the ADAPTER source code remained in the 3.5 version; thus, Altai made sure that the literal elements of its revamped OSCAR program were no longer substantially similar to the literal elements of CA's ADAPTER.

According to CA, the district court erroneously concluded that Altai's OSCAR 3.5 was not substantially similar to its own ADAPTER program. CA argues that this occurred because the district court "committed legal error in analyzing [its] claims of copyright infringement by failing to find that copyright protects expression contained in the non-literal elements of computer software." We disagree.

CA argues that, despite Altai's rewrite of the OSCAR code, the resulting program remained substantially similar to the structure of its ADAPTER program. As discussed above, a program's structure includes its non-literal components such as general flow charts as well as the more specific organization of inter-modular relationships, parameter lists, and macros. In addition to these aspects, CA contends that OSCAR 3.5 is also substantially similar to ADAPTER with respect to the list of services that both ADAPTER and OSCAR obtain from their respective operating systems. We must decide whether and to what extent these elements of computer programs are protected by copyright law.

The statutory terrain in this area has been well explored. See Lotus Dev. Corp. v. Paperback Software Int'l, 740 F. Supp. 37, 47-51 [15 USPQ2d 1577] (D. Mass. 1990); see also Whelan, 797 F.2d at 1240-42 ; Englund,at 885-90 ; Spivack, at 731-37 . The Copyright Act affords protection to "original works of authorship fixed in any tangible medium of expression." 17 U.S.C. Section 102(a) . This broad category of protected "works" includes "literary works," id., which are defined by the act as works, other than audiovisual works, expressed in words, numbers, or other verbal or numerical symbols or indicia, regardless of the nature of the material objects, such as books, periodicals, manuscripts, phonorecords, film tapes, disks, or cards, in which they are embodied.

17 U.S.C. Section 101. While computer programs are not specifically listed as part of the above statutory definition, the legislative history leaves no doubt that Congress intended them to be considered literary works. See H.R.Rep. No. 1476, 94th Cong., 2d Sess. 54, reprinted in 1976 U.S. C. C. A. N. 5659, 5667 (hereinafter "House Report"); Whelan,797 F.2d at 1234 ; Apple Computer, 714 F.2d at 1247 .

The syllogism that follows from the foregoing premises is a powerful one: if the non-literal structures of literary works are protected by copyright; and if computer programs are literary works, as we are told by the legislature; then the non-literal structures of computer programs are protected by copyright. See Whelan, 797 F.2d at 1234 ("By analogy to other literary works, it would thus appear that the copyrights of computer programs can be infringed even absent copying of the literal elements of the <23 USPQ2d 1250> program."). We have no reservation in joining the company of those courts that have already ascribed to this logic. See, e.g., Johnson Controls, Inc. v. <982 F.2d 703> Phoenix Control Sys., Inc., 886 F.2d 1173, 1175 [12 USPQ2d 1566] (9th Cir. 1989); Lotus Dev. Corp., 740 F. Supp. at 54 ; Digital Communications Assocs., Inc. v. Softklone Distrib. Corp., 659 F. Supp. 449, 455-56 [2 USPQ2d 1385] (N.D.Ga. 1987); Q-Co Indus., Inc. v. Hoffman, 625 F. Supp. 608, 615 [228 USPQ 554] (S.D.N.Y. 1985); SAS Institute, Inc. v. S & H Computer Sys., Inc., 605 F. Supp. 816, 829-30 [225 USPQ 916] (M.D.Tenn. 1985). However, that conclusion does not end our analysis. We must determine the scope of copyright protection that extends to a computer program's non-literal structure.

As a caveat, we note that our decision here does not control infringement actions regarding categorically distinct works, such as certain types of screen displays. These items represent products of computer programs, rather than the programs themselves, and fall under the copyright rubric of audiovisual works. If a computer audiovisual display is copyrighted separately as an audiovisual work, apart from the literary work that generates it (i.e., the program), the display may be protectable regardless of the underlying program's copyright status. See Stern Electronics, Inc. v. Kaufman, 669 F.2d 852, 855 [213 USPQ 443] (2d Cir. 1982) (explaining that an audiovisual works copyright, rather than a copyright on the underlying program, extended greater protection to the sights and sounds generated by a computer video game because the same audiovisual display could be generated by different programs). Of course, the copyright protection that these displays enjoy extends only so far as their expression is protectable. Data East USA, Inc. v. Epyx, Inc., 862 F.2d 204, 209 [9 USPQ2d 1322] (9th Cir. 1988). In this case, however, we are concerned not with a program's display, but the program itself, and then with only its non-literal components. In considering the copyrightability of these components, we must refer to venerable doctrines of copyright law.

1. IDEA VS. EXPRESSION DICHOTOMY

It is a fundamental principle of copyright law that a copyright does not protect an idea, but only the expression of the idea. See Baker v. Selden, 101 U.S. 99 (1879); Mazer v. Stein, 347U.S. 201, 217 [100 USPQ 325] (1954). This axiom of common law has been incorporated into the governing statute. Section 102(b) of the act provides:

In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.

17 U.S.C. Section 102(b) . See also House Report, at 5670 ("Copyright does not preclude others from using ideas or information revealed by the author's work.").

Congress made no special exception for computer programs. To the contrary, the legislative history explicitly states that copyright protects computer programs only "to the extent that they incorporate authorship in programmer's expression of original ideas, as distinguished from the ideas themselves." Id. at 5667; see also id. at 5670 ("Section 102(b) is intended . . . to make clear that the expression adopted by the programmer is the copyrightable element in a computer program, and that the actual processes or methods embodied in the program are not within the scope of copyright law.").

Similarly, the National Commission on New Technological Uses of Copyrighted Works ("CONTU") established by Congress to survey the issues generated by the interrelationship of advancing technology and copyright law, seePub.L.93-573, Section 201, 88 Stat. 1873 (1974), recommended, inter alia, that the 1976 Copyright Act "beamended . . . to make it explicit that computer programs, to the extent that they embody the author's original creation, are proper subject matter for copyright." See National Commission on New Technological Uses of Copyrighted Works, Final Report 1 (1979) (hereinafter "CONTU Report "). To that end, Congress adopted CONTU's suggestions and amended the Copyright Act by adding, among other things, a provision to 17 U.S.C. Section 101 which defined the term "computer program." SeePub.L. No. 96-517, Section 10(a), 94 Stat. <982 F.2d 704> 3028 (1980) . CONTU also "concluded that the idea-expression distinction should be used to determine which aspects of computer programs are copyrightable." Lotus Dev. Corp., 740 F.Supp. at 54 (citing CONTU Report, at 44) .

Drawing the line between idea and expression is a tricky business. Judge Learned Hand noted that "[n]obody has ever been able to fix that boundary, and nobody ever can." Nichols, 45 F.2d at 121 . Thirty years later his convictions remained firm."Obviously,no principle can be stated as to when an imitator has gone beyond copying the 'idea,' and has borrowed its 'expression,' " Judge Hand concluded."Decisions must therefore inevitably be ad hoc." Peter Pan Fabrics, Inc. v. Martin Weiner Corp., 274 <23 USPQ2d 1251> F.2d 487, 489 [124 USPQ 154] (2d Cir. 1960).

The essentially utilitarian nature of a computer program further complicates the task of distilling its idea from its expression. See SAS Institute, 605 F. Supp. at 829 ; cf. Englund, at 893 . In order to describe both computational processes and abstract ideas, its content "combines creative and technical expression." See Spivack, at 755 . The variations of expression found in purely creative compositions, as opposed to those contained in utilitarian works, are not directed towards practical application. For example, a narration of Humpty Dumpty's demise, which would clearly be a creative composition, does not serve the same ends as, say, a recipe for scrambled eggs – which is a more process oriented text. Thus, compared to aesthetic works, computer programs hover even more closely to the elusive boundary line described in Section 102(b)

While Baker v. Selden provides a sound analytical foundation, it offers scant guidance on how to separate idea or process from expression, and moreover, on how to further distinguish protectable expression from that expression which "must necessarily be used as incident to" the work's underlying concept. In the context of computer programs, the Third Circuit's noted decision in

Whelan has, thus far, been the most thoughtful attempt to accomplish these ends.

The court in Whelan faced substantially the same problem as is presented by this case. There, the defendant was accused of making off with the non-literal structure of the plaintiff's copyrighted dental lab management program, and employing it to create its own competitive version. In assessing whether there had been an infringement, the court had to determine which aspects of the programs involved were ideas, and which were expression. In separating the two, the court settled upon the following conceptual approach:

[T]he line between idea and expression may be drawn with reference to the end sought to be achieved by the work in question. In other words, the purpose or function of a utilitarian work would be the work's idea, and everything that is not necessary to that purpose or function would be part of the expression of the idea . . . . Where there are various means of achieving the desired purpose, then the <23 USPQ2d 1252> particular means chosen is not necessary to the purpose; hence, there is expression, not idea. 797 F.2d at 1236 (citations omitted).

The "idea" of the program at issue in Whelan was identified by the court as simply "the efficient management of a dental laboratory." Id. at n. 28 .

Whelan has fared even more poorly in the academic community, where its standard for distinguishing idea from expression has been widely criticized for being conceptually overbroad. See, e.g., Englund, at 881; Menell, at 1074, 1082 ; Kretschmer, at 837-39 ; Spivack, at 747-55 ; Thomas M. Gage, Note, Whelan Associates v. Jaslow Dental Laboratories: Copyright Protection for Computer Software Structure – What's the Purpose?, 1987 Wis. L. Rev. 859, 860-61 (1987). The leading commentator in the field has stated that, "[t]he crucial flaw in [Whelan's] reasoning is that it assumes that only one 'idea,' in copyright law terms, underlies any computer program, and that once a separable idea can be identified, everything else must be expression." 3 Nimmer Section 13.03 [F], at 13-62.34 . This criticism focuses not upon the program's ultimate purpose but upon the reality of its structural design. As we have already noted, a computer program's ultimate function or purpose is the composite result of interacting subroutines. Since each subroutine is itself a program, and thus, may be said to have its own "idea," Whelan's general formulation that a program's overall purpose equates with the program's idea is descriptively inadequate.

Accordingly, we think that Judge Pratt wisely declined to follow Whelan. See <982 F.2d 706> Computer Associates,775 F.Supp. at 558-60 . In addition to noting the weakness in the Whelandefinition of "program-idea," mentioned above, Judge Pratt found that Whelan'ssynonymous use of the terms "structure, sequence, and organization," see Whelan, 797 F.2d at 1224 n.1 , demonstrated a flawed understanding of a computer program's method of operation. See Computer Associates, 775 F.Supp.at 559-60 (discussing the distinction between a program's "static structure" and "dynamic structure"). Rightly, the district court found Whelan 's rationale suspect because it is so closely tied to what can now be seen – with the passage of time – as the opinion's somewhat outdated appreciation of computer science.

2. SUBSTANTIAL SIMILARITY TEST FOR COMPUTER PROGRAM STRUCTURE: ABSTRACTION-FILTRATION-COMPARISON

We think that Whelan'sapproach to separating idea from expression in computer programs relies too heavily on metaphysical distinctions and does not place enough emphasis on practical considerations. Cf. Apple Computer, 714 F.2d at 1253 (rejecting certain commercial constraints on programming as a helpful means of distinguishing idea from expression because they did "not enter into the somewhat metaphysical issue of whether particular ideas and expressions have merged"). As the cases that we shall discuss demonstrate, a satisfactory answer to this problem cannot be reached by resorting, a priori, to philosophical first principals.

In ascertaining substantial similarity under this approach, a court would first break down the allegedly infringed program into its constituent structural parts. Then, by examining each of these parts for such things as incorporated ideas, expression that is necessarily incidental to those ideas, and elements that are taken from the public domain, a court would then be able to sift out <23 USPQ2d 1253> all non-protectable material. Left with a kernel, or possibly kernels, of creative expression after following this process of elimination, the court's last step would be to compare this material with the structure of an allegedly infringing program. The result of this comparison will determine whether the protectable elements of the programs at issue are substantially similar so as to warrant a finding of infringement. It will be helpful to elaborate a bit further.

STEP ONE: ABSTRACTION

As the district court appreciated, see Computer Associates, 775 F. Supp. at 560 , the theoretic framework for analyzing substantial similarity expounded by Learned

Hand in the Nichols case is helpful in the present context. In Nichols,we enunciated what has now become known as the "abstractions" test for separating idea from expression:

Upon any work . . . a great number of patterns of increasing generality will fit equally well, as more and more of the incident is left out. The last may perhaps be no more than the most general statement of what the [work] is about, and at times might consist only of its title; but there is a point in this series of abstractions where they are no longer protected, since otherwise the [author] could prevent the use of his "ideas," to which, apart from their expression, his property is never extended.

NICHOLS, 45 F.2D AT 121 .

While the abstractions test was originally applied in relation to literary works such <982 F.2d 707> as novels and plays, it is adaptable to computer programs. In contrast to the Whelanapproach, the abstractions test "implicitly recognizes that any given work may consist of a mixture of numerous ideas and expressions." 3 Nimmer Section 13.03 [F] at 13-62.34-63 .

As applied to computer programs, the abstractions test will comprise the first step in the examination for substantial similarity. Initially, in a manner that resembles reverse engineering on a theoretical plane, a court should dissect the allegedly copied program's structure and isolate each level of abstraction contained within it. This process begins with the code and ends with an articulation of the program's ultimate function. Along the way, it is necessary essentially to retrace and map each of the designer's steps – in the opposite order in which they were taken during the program's creation. See Background: Computer Program Design, supra.

As an anatomical guide to this procedure, the following description is helpful:

At the lowest level of abstraction, a computer program may be thought of in its entirety as a set of individual instructions organized into a hierarchy of modules. At a higher level of abstraction, the instructions in the lowest-level modules may be replaced conceptually by the functions of those modules. At progressively higher levels of abstraction, the functions of higher-level modules conceptually replace the implementations of those modules in terms of lower-level modules and instructions, until finally, one is left with nothing but the ultimate function of the program. . . . A program has structure at every level of abstraction at which it is viewed. At low levels of abstraction, a program's structure may be quite complex; at the highest level it is trivial.

STEP TWO: FILTRATION

Once the program's abstraction levels have been discovered, the substantial similarity inquiry moves from the conceptual to the concrete. Professor Nimmer suggests, and we endorse, a "successive filtering method" for separating protectable expression from non-protectable material. See generally 3 Nimmer Section 13.03 [F] . This process entails examining the structural components at each level of abstraction to determine whether their particular inclusion at that level was "idea" or was dictated by considerations of efficiency, so as to be necessarily incidental to that idea; required by factors external to the program itself; or taken from the public domain and hence is non-protectable expression. See also Kretschmer,at 844-45 (arguing that program features dictated by market externalities or efficiency concerns are unprotectable). The structure of any given program may reflect some, all, or none of these considerations. Each case requires its own fact specific investigation.

Strictly speaking, this filtration serves "the purpose of defining the scope of plaintiff's copyright." Brown Bag Software v. Symantec Corp., No. 89-16239, slip op. 3719, 3738 [22 USPQ2d 1429] (9th Cir. April 7, 1992) (endorsing "analytic dissection" of computer programs in order to isolate protectable expression). By applying well developed doctrines of copyright law, it may ultimately leave behind a "core of protectable material." 3 Nimmer Section 13.03 [F] [5], at 13-72 . Further explication of this second step may be helpful.

(A) ELEMENTS DICTATED BY EFFICIENCY

The portion of Baker v. Selden, discussed earlier, which denies copyright protection to expression necessarily incidental to the idea being expressed, appears to be the cornerstone for what has developed into the doctrine of merger. Relying on Baker for the proposition that expression embodying the rules of a sweepstakes contest was inseparable from the idea of the contest itself, and therefore were not protectable by copyright); see also Digital Communications, 659 F. Supp. at 457 . The doctrine's underlying principle is that "[w]hen there is essentially only one way to express an idea, the idea and its expression are inseparable <982 F.2d 708> and copyright is no bar to copying that expression."

While, hypothetically, there might be a myriad of ways in which a programmer may effectuate certain functions within a program, – i.e., express the idea embodied in a given subroutine – efficiency concerns may so narrow the practical range of choice as to make only one or two forms of expression workable options. See3

Nimmer Section 13.03 [F] [2], at 13-63 ; see also Whelan, 797 F.2d at 1243 n.43 ("It is true that for certain tasks there are only a very limited number of file structures available, and in such cases the structures might not be copyrightable . . ."). Of course, not all program structure is informed by efficiency concerns. See Menell, at 1052 (besides efficiency, simplicity related to user accommodation has become a programming priority). It follows that in order to determine whether the merger doctrine precludes copyright protection to an aspect of a program's structure that is so oriented, a court must inquire "whether the use of this particular set of modules is necessary efficiently to implement that part of the program's process" being implemented. England, at 902 . If the answer is yes, then the expression represented by the programmer's choice of a specific module or group of modules has merged with their underlying idea and is unprotected. Id. at 902-03 .

Another justification for linking structural economy with the application of the merger doctrine stems from a program's essentially utilitarian nature and the competitive forces that exist in the software marketplace. See Kretschmer,at 842 . Working in tandem, these factors give rise to a problem of proof which merger helps to eliminate.

Efficiency is an industry-wide goal. Since, as we have already noted, there may be only a limited number of efficient implementations for any given program task, it is quite possible that multiple programmers, working independently, will design the identical method employed in the allegedly infringed work. Of course, if this is the case, there is no copyright infringement. See Roth Greeting Cards v. United Card Co., 429 F.2d 1106, 1110 [166 USPQ 291] (9th Cir. 1970); Sheldon, 81 F.2d at 54 .

Under these circumstances, the fact that two programs contain the same efficient structure may as likely lead to an inference of independent creation as it does to one of copying. See 3 Nimmer Section 13.03[F] [2], at 13-65 ; cf. Herbert Rosenthal Jewelry Corp., 446 F.2d at 741 (evidence of independent creation may stem from defendant's standing as a designer of previous similar works). Thus, since evidence of similarly efficient structure is not particularly probative of copying, it should be disregarded in the over <23 USPQ2d 1255> all substantial similarity analysis. See 3 Nimmer Section 13.03[F][2], at 13-65 .

We find support for applying the merger doctrine in cases that have already addressed the question of substantial similarity in the context of computer program structure. Most recently, in Lotus Dev. Corp., 740 F. Supp. at 66 , the district court had before it a claim of copyright infringement relating to the structure of a computer spreadsheet program. The court observed that "the basic spreadsheet screen display that resembles a rotated 'L' . . ., if not present in every expression of such a program, is present in most expressions." Id . Similarly, the court found that "an essential detail present in most if not all expressions of an electronic spreadsheet – is the designation of a particular key that, when pressed, will invoke the menu command system." Id . Applying the merger doctrine, the court denied copyright protection to both program elements. We agree with the approach taken in these decisions, and conclude that application of the merger doctrine in this setting is an effective way to eliminate non-protectable expression contained in computer programs.

(B) ELEMENTS DICTATED BY EXTERNAL FACTORS

We have stated that where "it is virtually impossible to write about a particular historical era or fictional theme without employing certain 'stock' or standard literary devices," such expression is not copyrightable. Hoehling v. Universal City Studios, Inc., 618 F.2d 972, 979 [205 USPQ 681] (2d Cir.), cert. denied, 449 U.S. 841 [207 USPQ 1064] (1980). For example, the Hoehling case was an infringement suit stemming from several works on the Hindenberg disaster. There we concluded that similarities in representations of German beer halls, scenes depicting German greetings such as "Heil Hitler," or the singing of certain German songs would not lead to a finding of infringement because they were " 'indispensable, or at least standard, in the treatment of' " life in Nazi Germany. Id . (quoting Alexander v. Haley, 460 F. Supp. 40, 45 [200 USPQ 239] (S.D.N.Y. 1978)). This is known as the scenes a faire doctrine, and like "merger," it has its analogous application to computer programs. Cf. Data East USA, 862 F.2d at 208 (applying scenes a faire to a home computer video game).

Professor Nimmer points out that "in many instances it is virtually impossible to write a program to perform particular functions in a specific computing environment without employing standard techniques." 3 Nimmer Section 13.03 [F] [3], at 13-65 . This is a result of the fact that a programmer's freedom of design choice is often circumscribed by extrinsic considerations such as (1) the mechanical specifications of the computer on which a particular program <982 F.2d 710> is intended to run; (2) compatibility requirements of other programs with which a program is designated to operate in conjunction; (3) computer manufacturers' design standards; (4) demands of the industry being serviced; and (5) widely accepted programming practices within the computer industry. Id. at 13-66-71 . Building upon this existing case law, we conclude that a court must also examine the structural content of an allegedly infringed program for elements that might have been dictated by external factors.

(C) ELEMENTS TAKEN FROM THE PUBLIC DOMAIN

Closely related to the non-protectability of scenes a faire, is material found in the public domain. Such material is free for the taking and cannot be appropriated by a single author even though it is included in a copyrighted work. See E.F. Johnson Co. v. Uniden Corp. of America,623 F.Supp. 1485, 1499 [228 USPQ 891] (D. Minn. 1985); see also Sheldon,81 F.2d at 54 . We see no reason to make an exception to this rule for elements of a computer program that have entered the public domain by virtue of freely accessible program exchanges and the like. See 3 Nimmer Section 13.03 [F] ; see also Brown Bag Software, slip op. at 3732 (affirming the district court's finding that "'[p]laintiffs may not claim copyright protection of an . . . expression that is, if not standard, then commonplace in the computer software industry.'"). Thus, a court must also filter out this material from the allegedly infringed program before it makes the final inquiry in its substantial similarity analysis.

STEP THREE: COMPARISON

The third and final step of the test for substantial similarity that we believe appropriate for non-literal program components entails a comparison. Once a court has sifted out all elements of the allegedly infringed program which are "ideas" or are dictated by efficiency or external factors, or taken from the public domain, there may remain a core of protectable expression. In terms of a work's copyright value, this is the golden nugget. See Brown Bag Software, slip op. at 3738 . At this point, the court's substantial similarity inquiry focuses on whether the defendant copied any aspect of this protected expression, as well as an assessment of the copied portion's relative importance with respect to the plaintiff's overall program. See3 Nimmer Section 13.03 [F] ; Data East USA, 862 F.2d at 208 ("To determine whether similarities result from unprotectable expression, analytic dissection of similarities may be <982 F.2d 711> performed. If . . . all similarities in expression arise from use of common ideas, then no substantial similarity can be found.")

3) Policy Considerations We are satisfied that the three step approach we have just outlined not only comports with, but advances the constitutional policies underlying the copyright act. Since any method that tries to distinguish idea from expression ultimately impacts on the scope of copyright protection afforded to a particular type of work, "the line [it draws] must be a pragmatic one, which also keeps in consideration 'the preservation of the balance between competition and protection.' " Apple Computer, 714 F.2d at 1253 (citation omitted).

Recently, the Supreme Court has emphatically reiterated that "[t]he primary objective of copyright is not to reward the labor of authors. . . ."Feist Publications, Inc. v. Rural Telephone Service Co., Inc., 111 S. Ct. 1282, 1290 [18 USPQ2d 1275] (1991) (emphasis added). While the Feist decision deals primarily with the copyrightability of purely factual compilations, its underlying tenets apply to much of the work involved in computer programming. Feist put to rest the "sweat of the brow" doctrine in copyright law. Id. at 1295 . The rationale of that doctrine "was that copyright was a reward for the hard work that went into compiling facts." Id. at 1291 . The Court flatly rejected this justification for extending copyright protection, noting that it "eschewed the most fundamental axiom of copyright law – that no one may copyright facts or ideas." Id.

Feist teaches that substantial effort alone cannot confer copyright status on an otherwise uncopyrightable work. As we have discussed, despite the fact that significant labor and expense often goes into computer program flow-charting and debugging, that process does not always result in inherently protectable expression. Thus, Feist implicitly undercuts the Whelan rationale, "which allow [ed] copyright protection beyond the literal computer code . . . [in order to] provide the proper incentive for programmers by protecting their most valuable efforts." Whelan, 797 F.2d at 1237 (footnote omitted). We note that Whelan was decided prior to Feist when the "sweat of the brow" doctrine still had vitality. In view of the Supreme <982 F.2d 712> Court's recent holding, however, we must reject the legal basis of CA's disincentive argument.

EVIDENTIARY ANALYSIS

The district court had to determine whether Altai's OSCAR 3.5 program was substantially similar to CA's ADAPTER. We note that Judge Pratt's method of analysis effectively served as a road map for our own, with one exception – Judge Pratt filtered out the non-copyrightable aspects of OSCAR 3.5 rather than those found in ADAPTER, the allegedly infringed program. We think that our approach – i.e., filtering out the unprotected aspects of an allegedly infringed program and then comparing the end product to the structure of the suspect program – is preferable, and therefore believe that district courts should proceed in this manner in future cases.

We opt for this strategy because, in some cases, the defendant's program structure might contain protectable expression and/or other elements that are not found in the plaintiff's program. Since it is extraneous to the allegedly copied work, this material would have no bearing on any potential substantial similarity between the two programs. Thus, its filtration would be wasteful and unnecessarily time consuming. Furthermore, by focusing the analysis on the infringing rather than on the infringed material, a court may mistakenly place too little emphasis on a quantitatively small misappropriation which is, in reality, a qualitatively vital aspect of the plaintiff's protectable expression.

The fact that the district court's analysis proceeded in the reverse order, however, had no material impact on the outcome of this case. Since Judge Pratt determined that OSCAR effectively contained no protectable expression whatsoever, the most serious charge that can be levelled against him is that he was overly thorough in his examination.

The district court took the first step in the analysis set forth in this opinion when it separated the program by levels of abstraction. The district court stated: As applied to computer software programs, this abstractions test would progress in order of "increasing generality" from object code, to source code, to parameter lists, to services required, to general outline. In discussing the particular similarities, therefore, we shall focus on these levels. While the facts of a different case might require that a district court draw a more particularized blueprint of a program's overall structure, this description is a workable one for the case at hand.

Moving to the district court's evaluation of OSCAR 3.5's structural components, we agree with Judge Pratt's systematic exclusion of non-protectable expression. With respect to code, the district court observed that after the rewrite of OSCAR 3.4 to OSCAR 3.5, "there remained virtually no lines of code that were identical to ADAPTER." Id. at 561 . Accordingly, the court found that the code "present [ed] no similarity at all." Id.at 562 .

Next, Judge Pratt addressed the issue of similarity between the two programs' parameter lists and macros. He concluded that, viewing the conflicting evidence most favorably to CA, it demonstrated that "only a few of the lists and macros were similar to protected elements in ADAPTER; the others were either in the public domain or dictated by the functional demands of the program." Id. As discussed above, functional elements and elements taken from the public domain do not qualify for copyright protection. With respect to the few remaining parameter lists and macros, the district court could reasonably conclude that they did not warrant a <982 F.2d 715> finding of infringement given their relative contribution to the overall program. See Warner Bros., Inc. v. American Broadcasting Cos., Inc., 720 F.2d 231, 242 [222 USPQ 101] (2d Cir. 1983) (discussing de minimis exception which allows for literal copying of a small and usually insignificant portion of the plaintiff's work); 3 Nimmer Section 13.03 [F] [5], at 13-74 . In any event, the district court reasonably found that, for lack of persuasive evidence, CA failed to meet its burden of proof on whether the macros and parameter lists at issue were substantially similar. See Computer Associates, 775 F. Supp. at 562 .

The district court also found that the overlap exhibited between the list of services required for both ADAPTER and OSCAR 3.5 was "determinated by the demands of the operating system and of the applications program to which it [was] to be linked <23 USPQ2d 1260> through ADAPTER or OSCAR." Id . In other words, this aspect of the program's structure was dictated by the nature of other programs with which it was designed to interact and, thus, is not protected by copyright.

Finally, in his infringement analysis, Judge Pratt accorded no weight to the similarities between the two programs' organizational charts, "because [the charts were] so simple and obvious to anyone exposed to the operation of the program [s]." Id . CA argues that the district court's action in this regard "is not consistent with copyright law" – that "obvious" expression is protected, and that the district court erroneously failed to realize this. However, to say that elements of a work are "obvious," in the manner in which the district court used the word, is to say that they "follow naturally from the work's theme rather than from the author's creativity." 3 Nimmer Section 13.03 [F] [3], at 13-65 . This is but one formulation of the scenes a faire doctrine, which we have already endorsed as a means of weeding out unprotectable expression.

CA argues, at some length, that many of the district court's factual conclusions regarding the creative nature of its program's components are simply wrong. Of course, we are limited in our review of factual findings to setting aside only those that we determine are clearly erroneous. See Fed. R. Civ.P. 52 . Upon a thorough review of the voluminous record in this case, which is comprised of conflicting testimony and other highly technical evidence, we discern no error on the part of Judge Pratt, let alone clear error.

Since we accept Judge Pratt's factual conclusions and the results of his legal analysis, we affirm his dismissal of CA's copyright infringement claim based upon OSCAR

3.5. We emphasize that, like all copyright infringement cases, those that involve computer programs are highly fact specific. The amount of protection due structural elements, in any given case, will vary according to the protectable expression found to exist within the program at issue.

Sony Corp., America Et al. v. Universal City Studios

US SUPREME COURT, 64 U.S. 417; 220 U.S.P.Q. (BNA) 665

Decided on January 17, 1984

Certiorari To The United States Court Of Appeals For The Ninth Circuit.

FAIR USE : BETAMAX DEFENCE

Petitioner Sony Corp. manufactures home video tape recorders (VTR's), and markets them through retail establishments, some of which are also petitioners. Respondents own the copyrights on some of the television programs that are broadcast on the public airwaves. Respondents brought an action against petitioners in Federal District Court, alleging that VTR consumers had been recording some of respondents' copyrighted works that had been exhibited on commercially sponsored television and thereby infringed respondents' copyrights, and further that petitioners were liable for such copyright infringement because of their marketing of the VTR's. Respondents sought money damages, an equitable accounting of profits, and an injunction against the manufacture and marketing of the VTR's. The District Court denied respondents all relief, holding that noncommercial home use recording of material broadcast over the public airwaves was a fair use of copyrighted works and did not constitute copyright infringement, and that petitioners could not be held liable as contributory infringers even if the home use of a VTR was considered an infringing use. The Court of Appeals reversed, holding petitioners liable for contributory infringement and ordering the District Court to fashion appropriate relief.

Held: The sale of the VTR's to the general public does not constitute contributory infringement of respondents' copyrights. Pp. 428-456.

The protection given to copyrights is wholly statutory, and, in a case like this, in which Congress has not plainly marked the course to be followed by the judiciary, this Court must be circumspect in construing the scope of rights created by a statute that never contemplated such a calculus of interests. Any individual may reproduce a copyrighted work for a "fair use"; the copyright owner does not possess the exclusive right to such a use. Pp. 428-434.

(b) *Kalem Co.* v. *Harper Brothers*, 222 U.S. 55, does not support respondents' novel theory that supplying the "means" to accomplish an infringing activity and encouraging that activity through advertisement are sufficient to establish liability for copyright infringement. This case does not fall in the category of those in which it is manifestly just to impose vicarious liability because the "contributory" infringer was in a position to control the use of copyrighted works by others and had authorized the use without permission from the copyright owner. Here, the only contact between petitioners and the users of the VTR's occurred at the moment of sale. And there is no precedent for imposing vicarious liability on the theory that petitioners sold the VTR's with constructive knowledge that their customers might use the equipment to make unauthorized copies of copyrighted material. The sale of copying equipment, like the sale of other articles of commerce, does not constitute contributory infringement if the product is widely used for legitimate, unobjectionable purposes, or, indeed, is merely capable of substantial noninfringing uses. Pp. 434-442.

(c) The record and the District Court's findings show (1) that there is a significant likelihood that substantial numbers of copyright holders who license their works for broadcast on free television would not object to having their broadcast time-shifted by private viewers (*i. e.*, recorded at a time whenthe VTR owner cannot view the broadcast so that it can be watched at a later time); and (2) that there is no likelihood that time-shifting would cause nonminimal harm to the potential market for, or the value of, respondents' copyrighted works. The VTR's are therefore capable of substantial noninfringing uses. Private, noncommercial time-shifting in the home satisfies this standard of noninfringing uses both because respondents have no right to prevent other copyright holders from authorizing such time-shifting for their programs, and because the District Court's findings reveal that even the unauthorized home time-shifting of respondents' programs is legitimate fair use. Pp. 442-456 Petitioners manufacture and sell home video tape recorders. Respondents own the copyrights on some of the television [p*420] programs that are broadcast on the public airwaves. Some members of the general public use video tape recorders sold by petitioners to record some of these broadcasts, as well as a large number of other broadcasts. The question presented is whether the sale of petitioners' copying equipment to the general public violates any of the rights conferred upon respondents by the Copyright Act.

Campbell v. Acuff-Rose Music, Inc.
US SUPREME COURT, 14 S.Ct. 1164;

Decided March 7, 1994

Certiorari to the US Court of Appeals for the Sixth Circuit

PARODY AND SCOPE OF FAIR USE

Respondent Acuff-Rose Music, Inc., filed suit against petitioners, the members of the rap music group 2 Live Crew and their record company, claiming that 2 Live Crew's song, "Pretty Woman,'' infringed Acuff-Rose's copyright in Roy Orbison's rock ballad, "Oh Pretty Woman.'' The District Court granted summary judgment for 2 Live Crew, holding that its song was a parody that made fair use of the original song. See Copyright Act of 1976, 17 U. S. C. ?107. The Court of Appeals reversed and remanded, holding that the commercial nature of the parody rendered it presumptively unfair under the first of four factors relevant under ?107; that, by taking the "heart'' of the original and making it the "heart'' of a new work, 2 Live Crew had, qualitatively, taken too much under the third ?107 factor; and that market harm for purposes of the fourth ?107 factor had been established by a presumption attaching to commercial uses.

Held: 2 Live Crew's commercial parody may be a fair use within the meaning of ?107.

Section 107, which provides that "the fair use of a copyrighted work . . . for purposes such as criticism [or] comment . . . is not an infringement . . . ,'' continues the common-law tradition of fair use adjudication and requires case-by-case analysis rather than bright-line rules. The statutory examples of permissible uses provide only general guidance. The four statutory factors are to be explored and weighed together in light of copyright's purpose of promoting science and the arts.

Parody, like other comment and criticism, may claim fair use. Under the first of the four ?107 factors, "the purpose and character of the use, including whether such use is of a commercial nature . . . ,'' the enquiry focuses on whether the new work merely supersedes the objects of the original creation, or whether and to what extent it is "transformative,'' altering the original with new expression, meaning, or message. The more transformative the new work, the less will be the significance of other factors, like commercialism, that may weigh against a finding of fair use. The heart of any parodist's claim to quote from existing material is the use of some elements of a prior author's composition to create a new one that, at least in part, comments on that author's work. But that tells courts little about where to draw the line. Thus, like other uses, parody has to work its way through the relevant factors.

The Court of Appeals properly assumed that 2 Live Crew's song contains parody commenting on and criticizing the original work, but erred in giving virtually dispositive weight to the commercial nature of that parody by way of a presumption, ostensibly culled from *Sony Corp. of America* v. *Universal City Studios, Inc.,* 464 U. S. 417, 451, that "every commercial use of copyrighted material is presumptively . . . unfair . . . .'' The statute makes clear that a work's commercial nature is only one element of the first factor enquiry into its purpose and character, and *Sony* itself called for no hard evidentiary presumption. The Court of Appeals's rule runs counter to *Sony* and to the long common-law tradition of fair use adjudication.

The second ?107 factor, "the nature of the copyrighted work,'' is not much help in resolving this and other parody cases, since parodies almost invariably copy publicly known, expressive works, like the Orbison song here.

The Court of Appeals erred in holding that, as a matter of law, 2 Live Crew copied excessively from the Orbison original under the third ?107 factor, which asks whether "the amount and substantiality of the portion used in relation to the copyrighted work as a whole'' are reasonable in relation to the copying's purpose. Even if 2 Live Crew's copying of the original's first line of lyrics and characteristic opening bass riff may be said to go to the original's "heart,'' that heart is what most readily conjures up the song for parody, and it is the heart at which parody takes aim. Moreover, 2 Live Crew thereafter departed markedly from the Orbison lyrics and produced otherwise distinctive music. As to the lyrics, the copying was not excessive in relation to the song's parodic purpose. As to the music, this Court expresses no opinion whether repetition of the bass riff is excessive copying, but remands to permit evaluation of the amount taken, in light of the song's parodic purpose and character, its transformative elements, and considerations of the potential for market substitution.

The Court of Appeals erred in resolving the fourth ?107 factor, "the effect of the use upon the potential market for or value of the copyrighted work,'' by presuming, in reliance on *Sony, supra,* at 451, the likelihood of significant market harm based on 2 Live Crew's use for commercial gain. No "presumption'' or inference of market harm that might find support in *Sony* is applicable to a case involving something beyond mere duplication for commercial purposes. The cognizable harm is market substitution, not any harm from criticism. As to parody pure and simple, it is unlikely that the work will act as a substitute for the original, since the two works usually serve different market functions. The fourth factor requires courts also to consider the potential market for derivative works. See, *e. g., Harper & Row, supra,* at 568. If the later work has cognizable substitution effects in protectable markets for derivative works, the law will look beyond the criticism to the work's other elements. 2 Live Crew's song comprises not only parody but also rap music. The absence of evidence or affidavits addressing the effect of 2 Live Crew's song on the derivative market for a nonparody, rap version of "Oh, Pretty Woman'' disentitled 2 Live Crew, as the proponent of the affirmative defense of fair use, to summary judgment. Reversed and remanded

A&M Records v. Napster, Inc.
US Court of Appeals for 9th Circuit, 239 F.3d 1004

Decided on February 12, 2001,

Appeal against Northern Dist. Court of California

PEER TO PEER NETWORKS, COPYRIGHT INFRINGEMENT

The panel affirmed in part and reversed in part a published decision by Chief District Judge Patel, 114 F. Supp. 2d 896, 900 (N.D. Cal. 2000), which entered a preliminary injunction against Napster in copyright infringement actions brought by various record companies holding copyrights in sound recordings. Napster is the designer and operator of a system that permits PC users to transmit and retain copyrighted sound recordings employing digital technology. Through a process known as "peer-to-peer" file sharing, Napster allows its users to make music files stored on individual computer hard drives available for copying by other Napster users, to search for music files stored on other users' computers, and to transfer exact copies of other users' music files from one computer to another via the Internet. The panel agreed with the district court that the record companies presented a prima facie case of direct copyright infringement by Napster users. The panel also agreed with the district court's rejection of Napster's affirmative defense that its users are engaged in fair use of the copyrighted material.

The panel upheld the district court's conclusion that Napster may be secondarily liable for the direct copyright infringement under two doctrines: contributory copyright infringement and vicarious copyright infringement. As to the contributory copyright infringement claim, the panel concluded that Napster knowingly encourages and assists its users to infringe the record companies' copyrights and Napster materially contributes to the infringing activity. As to the vicarious copyright infringement claim, the panel concluded that Napster has a direct financial interest in its users' infringing activity and retains the ability to police its system for infringing activity. The panel recognized that whether Napster may obtain shelter under the safe harbor provisions of the Digital Millennium

Copyright Act is an issue to be more fully developed at trial. The panel agreed with the district court that the Audio Home Recording Act did not cover the downloading of these music files to computer hard drives.

The panel concluded, however, that the scope of the district court's preliminary injunction was overbroad and remanded for the district court to modify the injunction as follows: Napster may be held liable for contributory copyright infringement only to the extent that Napster knows of specific infringing files with copyrighted musical compositions or sound recordings, knows or should have known that the files are available on the Napster system, and fails to act to prevent the distribution of the copyrighted material. Napster may be held liable for vicarious copyright infringement when it fails to affirmatively use its ability to patrol its system and preclude access to potentially infringing files listed in its search index.

The panel directs the district court to immediately enter a modified preliminary injunction.

NEW YORK TIMES CO., INC., et al. v. TASINI et al., US Supreme Court, 533 U.S. 483

Decided June 25, 2001

Certiorari To The United States Court Of Appeals For The Second Circuit

AUTHOR'S RIGHTS IN THE DIGITAL WORLD

Respondent freelance authors (Authors) wrote articles (Articles) for newspapers and a magazine published by petitioners New York Times Company (Times), Newsday, Inc. (Newsday), and Time, Inc. (Time). The Times, Newsday, and Time (Print Publishers) engaged the Authors as independent contractors under contracts that in no instance secured an Author's consent to placement of an Article in an electronic database. The Print Publishers each licensed rights to copy and sell articles to petitioner LEXIS/NEXIS, owner and operator of NEXIS. NEXIS is a computerized database containing articles in text-only format from hundreds of periodicals spanning many years. Subscribers access NEXIS through a computer, may search for articles using criteria such as author and subject, and may view, print, or download each article yielded by the search. An article's display identifies its original print publication, date, section, initial page number, title, and author, but each article appears in isolation-without visible link to other stories originally published in the same periodical edition. NEXIS does not reproduce the print publication's formatting features such as headline size and page placement. The Times also has licensing agreements with petitioner University Microfilms International (UMI), authorizing reproduction of Times materials on two CD-ROM products. One, the New York Times OnDisc (NYTO), is a text-only database containing Times articles presented in essentially the same way they appear in LEXIS/NEXIS. The other, General Periodicals OnDisc (GPO), is an image-based system that reproduces the Times' Sunday Book Review and Magazine exactly as they appeared on the printed pages, complete with photographs, captions, advertisements, and other surrounding materials. The two CD-ROM products are searchable in much the same way as LEXIS/NEXIS; in both, articles retrieved by users provide no links to other articles appearing in the original print publications.

The Authors filed this suit, alleging that their copyrights were infringed when, as permitted and facilitated by the Print Publishers, LEXIS/NEXIS and UMI (Electronic Publishers) placed the Articles in NEXIS, NYTO, and GPO (Databases). The Authors sought declaratory and injunctive relief, and damages. In response to the Authors' complaint, the Print and Electronic Publishers raised the privilege accorded collective work copyright owners by §201(c) of the Copyright Act. That provision, pivotal in this case, reads: "Copyright in each separate contribution to a collective work is distinct from copyright in the collective work as a whole, and vests initially in the author of the contribution. In the absence of an express transfer of the copyright or of any rights under it, the owner of copyright in the collective work is presumed to have acquired only the privilege of reproducing and distributing the contribution as part of that particular collective work, any revision of that collective work, and any later collective work in the same series." The District Court granted the Publishers summary judgment, holding, inter alia, that the Databases reproduced and distributed the Authors' works, in §201(c)'s words, "as part of … [a] revision of that collective work" to which the Authors had first contributed. The Second Circuit reversed, granting the Authors summary judgment on the ground that the Databases were not among the collective works covered by §201(c), and specifically, were not "revisions" of the periodicals in which the Articles first appeared.

Held: Section 201(c) does not authorize the copying at issue here. The Publishers are not sheltered by §201(c) because the Databases reproduce and distribute articles standing alone and not in context, not "as part of that particular collective work" to which the author contributed, "as part of … any revision" thereof, or "as part of … any later collective work in the same series." Pp. 8-21.

(a) Where, as here, a freelance author has contributed an article to a collective work, copyright in the contribution vests initially in its author. §201(c). Copyright in the collective work vests in the collective author (here, the Print Publisher) and extends only to the creative material contributed by that author, not to "the preexisting material employed in the work," §103(b). Congress enacted the provisions of the 1976 revision of the Copyright Act at issue to address the unfair situation under prior law, whereby authors risked losing their rights when they placed an article in a collective work. The 1976 Act recast the copyright as a bundle of discrete "exclusive rights," §106, each of which "may be transferred … and owned separately," §201(d)(2). The Act also provided, in §404(a), that "a single notice applicable to the collective work as a whole is sufficient" to protect the rights of freelance contributors. Together, §404(a) and §201(c) preserve the author's copyright in a contribution to a collective work. Under §201(c)'s terms, a publisher could reprint a contribution from one issue in a later issue of its magazine, and could reprint an article from one edition of an encyclopedia in a later revision of it, but could not revise the contribution itself or include it in a new anthology or an entirely different collective work. Essentially, §201(c) adjusts a publisher's copyright in its collective work to accommodate a freelancer's copyright in her contribution. If there is demand for a freelance article standing alone or in a new collection, the Copyright Act allows the freelancer to benefit from that demand; after authorizing initial publication, the freelancer may also sell the article to others. Cf. Stewart v. Abend, 495 U.S. 207, 229, 230. It would scarcely preserve the author's copyright in a contribution as contemplated by Congress if a print publisher, without the author's permission, could reproduce or distribute discrete copies of the contribution in isolation or within new collective works. Pp. 8-12.

(b) The Publishers' view that inclusion of the Articles in the Databases lies within the "privilege of reproducing and distributing the [Articles] as part of … [a] revision of that collective work," §201(c), is unacceptable. In determining whether the Articles have been reproduced and distributed "as part of" a "revision," the Court focuses on the Articles as presented to, and perceptible by, a Database user. See §§102, 101. Here, the three Databases present articles to users clear of the context provided either by the original periodical editions or by any revision of those editions. The Databases first prompt users to search the universe of their contents: thousands or millions of files containing individual articles from thousands of collective works (i.e., editions), either in one series (the Times, in NYTO) or in scores of series (the sundry titles in NEXIS and GPO). When the user conducts a search, each article appears as a separate item within the search result. In NEXIS and NYTO, an article appears to a user without the graphics, formatting, or other articles with which it was initially published. In GPO, the article appears with the other materials published on the same page or pages, but without any material published on other pages of the original periodical. In either circumstance, the Database does not reproduce and distribute the article "as part of" either the original edition or a "revision" of that edition. The articles may be viewed as parts of a new compendium-namely, the entirety of works in the Database. Each edition of each periodical, however, represents only a miniscule fraction of the ever-expanding Database. The massive whole of the Database is not recognizable as a new version of its every small part. Furthermore, the Articles in the Databases may be viewed "as part of" no larger work at all, but simply as individual articles presented individually. That each article bears marks of its origin in a particular periodical suggests the article was previously part of that periodical, not that the article is currently reproduced or distributed as part of the periodical. The Databases' reproduction and distribution of individual Articles-simply as individual Articles-would invade the core of the Authors' exclusive rights. The Publishers' analogy between the Databases and microfilm and microfiche is wanting: In the Databases, unlike microfilm, articles appear disconnected from their original context.

Unlike the conversion of newsprint to microfilm, the transfer of articles to the Databases does not represent a mere conversion of intact periodicals (or revisions of periodicals) from one medium to another. The Databases offer users individual articles, not intact periodicals. The concept of "media-neutrality" invoked by the Publishers should therefore protect the Authors' rights, not the Publishers'. The result is not changed because users can manipulate the Databases to generate search results consisting entirely of articles from a particular periodical edition. Under §201(c), the question is not whether a user can assemble a revision of a collective work from a database, but whether the database itself perceptibly presents the author's contribution as part of a revision of the collective work. That result is not accomplished by these Databases. Pp. 12-19.

(c) The Publishers' warning that a ruling for the Authors will have "devastating" consequences, punching gaping holes in the electronic record of history, is unavailing. It hardly follows from this decision that an injunction against the inclusion of these Articles in the Databases (much less all freelance articles in any databases) must issue. The Authors and Publishers may enter into an agreement allowing continued electronic reproduction of the Authors' works; they, and if necessary the courts and Congress, may draw on numerous models for distributing copyrighted works and remunerating authors for their distribution. In any event, speculation about future harms is no basis for this Court to shrink authorial rights created by Congress. The Court leaves remedial issues open for initial airing and decision in the District Court. Pp. 19-21.

Universal City Studios, Inc. v. Corley Court of Appeals for 2nd Circuit, 273 F.3d 429.

Decided on 28th November 2001

Appeal from the amended final judgment of the United States District Court for the Southern District of New York

CIRCUMVENTION OF TECHNOLOGY/ DMCA

Eric Corley, who operated a website for the "hacker community" - on which he posted both the program and links to DeCSS - appealed the decision to the Second Circuit Court of Appeals. Many critics and commentators, including law professors and public interest organizations, came to his aid, filing amicus briefs in support of a fair use defense to DMCA violations.

Central to their argument was the contention that fair use is a constitutionally *required* "safety valve" that reconciles the conflict between copyright laws and the First Amendment. As such, Judge Kaplan's distinction that allows fair use as a defense to copyright infringement but not as a defense to DMCA violations was considered unduly narrow. Without a fair use defense operating as a safety valve, the DMCA impermissibly grinds against the immutable protections of speech and expression granted by the First Amendment. The appellants and amici did not have the benefit of a Supreme Court decision directly on point, but their contention was not without merit. Although the Supreme Court had never decided the issue, it had intimated through dicta that it could someday recognize a constitutional requirement of fair use. Indeed, the Second Circuit itself had also on several occasions indicated a similar acceptance of appellants' proposition.

Unfortunately for the appellants, the panel reviewing the *Corley* decision viewed their contention, that the DMCA is unconstitutional without a fair use defense, as an "extravagant claim".In a unanimous decision, the three-judge panel affirmed the trial court's holding in all material regards.

First, the Court agreed with the parties that posting and linking to DeCSS has a constitutionally protected speech component. However, the Court found that its functional component (i.e. its circumvention ability) might be regulated by Congress without violating the First Amendment. Applying garden variety constitutional case law, the Court determined the challenged provision of the DMCA "serves a substantial governmental interest, [which] is unrelated to the suppression of free expression, and ... does not 'burden substantially more speech than is necessary'."

Turning to the issue of fair use, the Court essentially adopted the lower court's distinction with respect to §1201(c)(1), concluding that fair use is not a defense to the use of, or trafficking in, circumvention devices, but only to infringing uses of copyrighted works after such works are obtained. In other words, the DMCA targets circumvention only, and "does not concern itself with the use of ... materials after circumventions has occurred." Rejecting the appellants' expansive construction, the Court held that §1201(c)(1) merely "ensures that the DMCA is not read to prohibit the 'fair use' of information just because that information was obtained in a manner made illegal by the DMCA. Appellants' *trafficking* in circumvention devices, the Court concluded, amounted neither to *circumvention* of a pre-determined class of works protected by §1201(a)(1), nor to *infringement* of a copyrighted work, the fair use of which is protected by §1201(c)(1). Accordingly, the fair use defense was inapplicable to appellants' violation of the DMCA.

To support this interpretation of the statutory framework, the Second Circuit pointed to the legislative history of the DMCA, and concluded that "it would be strange for Congress to open small, carefully limited windows for circumvention to permit fair use," (referring to the fair use exemptions discussed in Section B(1)(b) *supra*), "if it then meant to exempt in subsection 1201(c)(1) any circumvention necessary for fair use." Thus the Court turned the appellants' argument on its head: the well-documented Congressional concern for fair use did *not* indicate its intent to allow the defense for all violations of the Act. On the contrary, in light of this concern, Congressional silence on fair use with respect to trafficking in, or use of circumvention devices outside the explicit exemptions, was held to mean Congress had considered but rejected it.

In concluding that the DMCA does not afford a fair use defense to many uses of, and all trafficking in, circumvention devices, the Second Circuit set the stage to consider whether such a proscription ran afoul of any purported constitutional requirement that fair use must always be privileged. Here, appellants' arguments were found wanting again, as the Court expressed serious skepticism of their "extravagant claim" that such a requirement would be firm enough to completely invalidate the DMCA. The Court did note the "isolated statements in [the Supreme Court's] opinions [which] might arguably be enlisted for such a requirement," but concluded that it did not have to resolve the issue in this case.

The Court's justification for dodging the issue was threefold: First, "the Appellants do not claim to be making fair use of any copyrighted materials, and nothing in the injunction prohibits them from making such fair use." Thus the mere fact that DeCSS could be employed to make fair use of copyrighted works was of no consequences to these appellants, because they themselves were not using it as such, but were only involved in its trafficking to facilitate unauthorized access to copyrighted materials. Second, "the evidence as to the impact of the anti-trafficking provision of the DMCA on prospective fair users is scanty and fails to adequately address the issues." Finally, the Court found "no authority for the proposition that fair use, as protected by the Copyright Act, much less the Constitution, guarantees copying by the optimum method or in the identical format of the original." As such, even if the Constitution were to require some level of fair use, such level is afforded by the DMCA with respect to DVD movies, because nothing in the statute would prevent someone from commenting on content, quoting excerpts, or even recording portions of the content by pointing a camcorder to a monitor displaying the DVD movie. Nothing in the Constitution, the Court concluded, required fair use as "a guarantee of access to copyrighted material in order to copy it by the fair user's preferred technique or in the format of the original."As such, the constitutional element of appellants' claim was deemed irrelevant and ignored.

UNIVERSAL CITY STUDIOS, INC. v. REIMERDES United States District Court for the Southern District of New York, 82 F. Supp. 2d 211;

Decided on February 2, 2000

CIRCUMVENTION OF TECHNOLOGY

Plaintiff motion picture studios brought an action under the Digital Millennium Copyright Act to enjoin defendants from providing a computer program on their Internet Web sites that permitted users to decrypt and copy plaintiffs' copyrighted motion pictures from digital versatile disks.

Defendants Web site owners promulgated, through the Internet, software called DeCSS, which decoded the scrambled signal on plaintiffs' motion picture studios' digital versatile disks (DVDs) so that owners of DVDs could reproduce flawless copies of those movies in violation of copyright laws. Defendants filed suit in order to enjoin defendants from distributing such DeCSS programming. Before the court was defendants' motion for a preliminary injunction to prevent the distribution of the DeCSS programming until resolution of the case. The court ordered the preliminary injunction, finding that plaintiffs showed irreparable harm if defendants' action continued because their copyrighted material would continue to be violated. Moreover, plaintiffs showed a likelihood of success on the merits because defendants' argued exceptions to copyright infringements under the Digital Millennium Copyright Act were inapplicable and their free speech under the U.S. Const. amend. I argument was practically outright rejected by the court.

OUTCOME: The preliminary injunction was granted because the court found that plaintiffs showed both irreparable harm if the defendants' action continued (because their copyrighted material would continue to be violated) and a likelihood of success on the merits (because defendants' argued exceptions and free speech arguments were practically outright rejected by the court).

METRO-GOLDWYN-MAYER STUDIOS INC. et al. v. GROKSTER, LTD., et al.

US Supreme Court, No. 04-480.

Decided June 27, 2005

CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

Respondent companies distribute free software that allows computer users to share electronic files through peer-to-peer networks, so called because the computers communicate directly with each other, not through central servers. Although such networks can be used to share any type of digital file, recipients of respondents' software have mostly used them to share copyrighted music and video files without authorization. Seeking damages and an injunction, a group of movie studios and other copyright holders (hereinafter MGM) sued respondents for their users' copyright infringements, alleging that respondents knowingly and intentionally distributed their software to enable users to infringe copyrighted works in violation of the Copyright Act.

Discovery revealed that billions of files are shared across peer-to-peer networks each month. Respondents are aware that users employ their software primarily to download copyrighted files, although the decentralized networks do not reveal which files are copied, and when. Respondents have sometimes learned about the infringement directly when users have e-mailed questions regarding copyrighted works, and respondents have replied with guidance. Respondents are not merely passive recipients of information about infringement. The record is replete with evidence that when they began to distribute their free software, each of them clearly voiced the objective that recipients use the software to download copyrighted works and took active steps to encourage infringement. After the notorious file-sharing service, Napster, was sued by copyright holders for facilitating copyright infringement, both respondents promoted and marketed themselves as Napster alternatives. They receive no revenue from users, but, instead, generate income by selling advertising space, then streaming the advertising to their users. As the number of users increases, advertising opportunities are worth more. There is no evidence that either respondent made an effort to filter copyrighted material from users' downloads or otherwise to impede the sharing of copyrighted files.

While acknowledging that respondents' users had directly infringed MGM's copyrights, the District Court nonetheless granted respondents summary judgment as to liability arising from distribution of their software. The Ninth Circuit affirmed. It read Sony Corp. of America v. Universal City Studios, Inc., 464 U.S. 417, as holding that the distribution of a commercial product capable of substantial noninfringing uses could not give rise to contributory liability for infringement unless the distributor had actual knowledge of specific instances of infringement and failed to act on that knowledge. Because the appeals court found respondents' software to be capable of substantial noninfringing uses and because respondents had no actual knowledge of infringement owing to the software's decentralized architecture, the court held that they were not liable. It also held that they did not materially contribute to their users' infringement because the users themselves searched for, retrieved, and stored the infringing files, with no involvement by respondents beyond providing the software in the first place. Finally, the court held that respondents could not be held liable under a vicarious infringement theory because they did not monitor or control the software's use, had no agreed-upon right or current ability to supervise its use, and had no independent duty to police infringement.

Held: One who distributes a device with the object of promoting its use to infringe copyright, as shown by clear expression or other affirmative steps taken to foster infringement, going beyond mere distribution with knowledge of third-party action, is liable for the resulting acts of infringement by third parties using the device, regardless of the device's lawful uses. Pp. 10—24.

(a) The tension between the competing values of supporting creativity through copyright protection and promoting technological innovation by limiting infringement liability is the subject of this case. Despite offsetting considerations, the argument for imposing indirect liability here is powerful, given the number of infringing downloads that occur daily using respondents' software. When a widely shared product is used to commit infringement, it may be impossible to enforce rights in the protected work effectively against all direct infringers, so that the only practical alternative is to go against the device's distributor for secondary liability on a theory of contributory or vicarious infringement. One infringes contributorily by intentionally inducing or encouraging direct infringement, and infringes vicariously by profiting from direct infringement while declining to exercise the right to stop or limit it. Although “[t]he Copyright Act does not expressly render anyone liable for [another’s] infringement,” Sony, 464 U.S., at 434, these secondary liability doctrines emerged from common law principles and are well established in the law, e.g., id., at 486. Pp. 10—13.

(b) Sony addressed a claim that secondary liability for infringement can arise from the very distribution of a commercial product. There, copyright holders sued Sony, the manufacturer of videocassette recorders, claiming that it was contributorily liable for the infringement that occurred when VCR owners taped copyrighted programs. The evidence showed that the VCR’s principal use was “time-shifting,” i.e., taping a program for later viewing at a more convenient time, which the Court found to be a fair, noninfringing use. 464 U.S., at 423—424. Moreover, there was no evidence that Sony had desired to bring about taping in violation of copyright or taken active steps to increase its profits from unlawful taping. Id., at 438. On those facts, the only conceivable basis for liability was on a theory of contributory infringement through distribution of a product. Id., at 439. Because the VCR was “capable of commercially significant noninfringing uses,” the Court held that Sony was not liable. Id., at 442. This theory reflected patent law’s traditional staple article of commerce doctrine that distribution of a component of a patented device will not violate the patent if it is suitable for use in other ways. 35 U.S. C §271(c). The doctrine absolves the equivocal conduct of selling an item with lawful and unlawful uses and limits liability to instances of more acute fault. In this case, the Ninth Circuit misread Sony to mean that when a product is capable of substantial lawful use, the producer cannot be held contributorily liable for third parties’ infringing use of it, even when an actual purpose to cause infringing use is shown, unless the distributors had specific knowledge of infringement at a time when they contributed to the infringement and failed to act upon that information. Sony did not displace other secondary liability theories. Pp. 13—17.

(c) Nothing in Sony requires courts to ignore evidence of intent to promote infringement if such evidence exists. It was never meant to foreclose rules of fault-based liability derived from the common law. 464 U.S., at 439. Where evidence goes beyond a product’s characteristics or the knowledge that it may be put to infringing uses, and shows statements or actions directed to promoting infringement, Sony’s staple-article rule will not preclude liability. At common law a copyright or patent defendant who “not only expected but invoked [infringing use] by advertisement” was liable for infringement. Kalem Co. v. Harper Brothers, 222 U.S. 55, 62—63. The rule on inducement of infringement as developed in the early cases is no different today. Evidence of active steps taken to encourage direct infringement, such as advertising an infringing use or instructing how to engage in an infringing use, shows an affirmative intent that the product be used to infringe, and overcomes the law’s reluctance to find liability when a defendant merely sells a commercial product suitable for some lawful use. A rule that premises liability on purposeful, culpable expression and conduct does nothing to compromise legitimate commerce or discourage innovation having a lawful promise. Pp. 17—20.

(d) On the record presented, respondents’ unlawful objective is unmistakable. The classic instance of inducement is by advertisement or solicitation that broadcasts a message designed to stimulate others to commit violations. MGM argues persuasively that such a message is shown here. Three features of the evidence of intent are particularly notable. First, each of the respondents showed itself to be aiming to satisfy a known source of demand for copyright infringement, the market comprising former Napster users. Respondents’ efforts to supply services to former Napster users indicate a principal, if not exclusive, intent to bring about infringement. Second, neither respondent attempted to develop filtering tools or other mechanisms to diminish the infringing activity using their software. While the Ninth Circuit treated that failure as irrelevant because respondents lacked an independent duty to monitor their users’ activity, this evidence underscores their intentional facilitation of their users’ infringement. Third, respondents make money by selling advertising space, then by directing ads to the screens of computers employing their software. The more their software is used, the more ads are sent out and the greater the advertising revenue. Since the extent of the software’s use determines the gain to the distributors, the commercial sense of their enterprise turns on high-volume use, which the record shows is infringing. This evidence alone would not justify an inference of unlawful intent, but its import is clear in the entire record’s context. Pp. 20—23.

(e) In addition to intent to bring about infringement and distribution of a device suitable for infringing use, the inducement theory requires evidence of actual infringement by recipients of the device, the software in this case. There is evidence of such infringement on a gigantic scale. Because substantial evidence supports MGM on all elements, summary judgment for respondents was error. On remand, reconsideration of MGM’s summary judgment motion will be in order. Pp. 23—24. 380 F.3d 1154, vacated and remanded.

ELDRED et al. v. ASHCROFT, ATTORNEY GENERAL (US Supreme Court), 537 U.S. 186

Decided January 15, 2003

Certiorari to the united states court of appeals for the District of Columbia Circuit

VALIDITY OF COPYRIGHT TERM EXTENSION

The Copyright and Patent Clause, U.S. Const., Art. I, §8, cl. 8, provides as to copyrights: "Congress shall have Power … [t]o promote the Progress of Science … by securing [to Authors] for limited Times … the exclusive Right to their … Writings." In the 1998 Copyright Term Extension Act (CTEA), Congress enlarged the duration of copyrights by 20 years: Under the 1976 Copyright Act (1976 Act), copyright protection generally lasted from a work's creation until 50 years after the author's death; under the CTEA, most copyrights now run from creation until 70 years after the author's death, 17 U.S.C. § 302(a). As in the case of prior copyright extensions, principally in 1831, 1909, and 1976, Congress provided for application of the enlarged terms to existing and future copyrights alike.

Petitioners, whose products or services build on copyrighted works that have gone into the public domain, brought this suit seeking a determination that the CTEA fails constitutional review under both the Copyright Clause's "limited Times" prescription and the First Amendment's free speech guarantee. Petitioners do not challenge the CTEA's "life-plus-70-years" time span itself. They maintain that Congress went awry not with respect to newly created works, but in enlarging the term for published works with existing copyrights. The "limited Tim[e]" in effect when a copyright is secured, petitioners urge, becomes the constitutional boundary, a clear line beyond the power of Congress to extend. As to the First Amendment, petitioners contend that the CTEA is a content-neutral regulation of speech that fails inspection under the heightened judicial scrutiny appropriate for such regulations. The District Court entered judgment on the pleadings for the Attorney General (respondent here), holding that the CTEA does not violate the Copyright Clause's "limited Times" restriction because the CTEA's terms, though longer than the 1976 Act's terms, are still limited, not perpetual, and therefore fit within Congress' discretion. The court also held that there are no First Amendment rights to use the copyrighted works of others. The District of Columbia Circuit affirmed. In that court's unanimous view, *Harper & Row, Publishers, Inc.* v. *Nation Enterprises,* 471 U.S. 539, foreclosed petitioners' First Amendment challenge to the CTEA.

The appeals court reasoned that copyright does not impermissibly restrict free speech, for it grants the author an exclusive right only to the specific form of expression; it does not shield any idea or fact contained in the copyrighted work, and it allows for "fair use" even of the expression itself. A majority of the court also rejected petitioners' Copyright Clause claim. The court ruled that Circuit precedent precluded petitioners' plea for interpretation of the "limited Times" prescription with a view to the Clause's preambular statement of purpose: "To promote the Progress of Science." The court found nothing in the constitutional text or history to suggest that a term of years for a copyright is not a "limited Time" if it may later be extended for another "limited Time." Recounting that the First Congress made the 1790 Copyright Act applicable to existing copyrights arising under state copyright laws, the court held that that construction by contemporaries of the Constitution's formation merited almost conclusive weight under *Burrow-Giles Lithographic Co.* v. *Sarony,* 111 U.S. 53, 57. As early as *McClurg* v. *Kingsland,* 1 How. 202, the Court of Appeals recognized, this Court made it plain that the Copyright Clause permits Congress to amplify an existing patent's terms. The court added that this Court has been similarly deferential to Congress' judgment regarding copyright. *E.g., Sony Corp. of America* v. *Universal City Studios, Inc.,* 464 U.S. 417. Concerning petitioners' assertion that Congress could evade the limitation on its authority by stringing together an unlimited number of "limited Times," the court stated that such legislative misbehavior clearly was not before it. Rather, the court emphasized, the CTEA matched the baseline term for United States copyrights with the European Union term in order to meet contemporary circumstances.

Held: In placing existing and future copyrights in parity in the CTEA, Congress acted within its authority and did not transgress constitutional limitations. Pp. 7-31.

1. The CTEA's extension of existing copyrights does not exceed Congress' power under the Copyright Clause. Pp. 7-28.

(a) Guided by text, history, and precedent, this Court cannot agree with petitioners that extending the duration of existing copyrights is categorically beyond Congress' Copyright Clause authority. Although conceding that the CTEA's baseline term of life plus 70 years qualifies as a "limited Tim[e]" as applied to future copyrights, petitioners contend that existing copyrights extended to endure for that same term are not "limited." In petitioners' view, a time prescription, once set, becomes forever "fixed" or "inalterable." The word "limited," however, does not convey a meaning so constricted. At the time of the Framing, "limited" meant what it means today: confined within certain bounds, restrained, or circumscribed. Thus understood, a time span appropriately "limited" as applied to future copyrights does not automatically cease to be "limited" when applied to existing copyrights. To comprehend the scope of Congress' Copyright Clause power, "a page of history is worth a volume of logic." *New York Trust Co.* v. *Eisner,* 256 U.S. 345, 349. History reveals an unbroken congressional practice of granting to authors of works with existing copyrights the benefit of term extensions so that all under copyright protection will be governed evenhandedly under the same regime. Moreover, because the Clause empowering Congress to confer copyrights also authorizes patents, the Court's inquiry is significantly informed by the fact that early Congresses extended the duration of numerous individual patents as well as copyrights. Lower courts saw no "limited Times" impediment to such extensions. Further, although this Court never before has had occasion to decide whether extending existing copyrights complies with the "limited Times" prescription, the Court has found no constitutional barrier to the legislative expansion of existing patents. See, *e.g., McClurg,* 1 How., at 206. Congress' consistent historical practice reflects a judgment that an author who sold his work a week before should not be placed in a worse situation than the author who sold his work the day after enactment of a copyright extension. The CTEA follows this historical practice by keeping the 1976 Act's duration provisions largely in place and simply adding 20 years to each of them.

The CTEA is a rational exercise of the legislative authority conferred by the Copyright Clause. On this point, the Court defers substantially to Congress. *Sony*, 464 U.S., at 429. The CTEA reflects judgments of a kind Congress typically makes, judgments the Court cannot dismiss as outside the Legislature's domain. A key factor in the CTEA's passage was a 1993 European Union (EU) directive instructing EU members to establish a baseline copyright term of life plus 70 years and to deny this longer term to the works of any non-EU country whose laws did not secure the same extended term. By extending the baseline United States copyright term, Congress sought to ensure that American authors would receive the same copyright protection in Europe as their European counterparts. The CTEA may also provide greater incentive for American and other authors to create and disseminate their work in the United States. Additionally, Congress passed the CTEA in light of demographic, economic, and technological changes, and rationally credited projections that longer terms would encourage copyright holders to invest in the restoration and public distribution of their works. Pp. 7-17.

(b) Petitioners' Copyright Clause arguments, which rely on several novel readings of the Clause, are unpersuasive. Pp. 17-28.

(1) Nothing before this Court warrants construction of the CTEA's 20-year term extension as a congressional attempt to evade or override the "limited Times" constraint. Critically, petitioners fail to show how the CTEA crosses a constitutionally significant threshold with respect to "limited Times" that the 1831, 1909, and 1976 Acts did not. Those earlier Acts did not create perpetual copyrights, and neither does the CTEA. Pp. 18-19.

(2) Petitioners' dominant series of arguments, premised on the proposition that Congress may not extend an existing copyright absent new consideration from the author, are unavailing. The first such contention, that the CTEA's extension of existing copyrights overlooks the requirement of "originality," incorrectly relies on *Feist Publications, Inc.* v. *Rural Telephone Service Co.,* 499 U.S. 340, 345, 359. That case did not touch on the duration of copyright protection. Rather, it addressed only the core question of copyrightability. Explaining the originality requirement, *Feist* trained on the Copyright Clause words "Authors" and "Writings," *id.,* at 346-347, and did not construe the "limited Times" prescription, as to which the originality requirement has no bearing. Also unavailing is petitioners' second argument, that the CTEA's extension of existing copyrights fails to "promote the Progress of Science" because it does not stimulate the creation of new works, but merely adds value to works already created. The justifications that motivated Congress to enact the CTEA, set forth *supra*, provide a rational basis for concluding that the CTEA "promote[s] the Progress of Science."

Moreover, Congress' unbroken practice since the founding generation of applying new definitions or adjustments of the copyright term to both future works and existing works overwhelms petitioners' argument. Also rejected is petitioners' third contention, that the CTEA's extension of existing copyrights without demanding additional consideration ignores copyright's *quid pro quo,* whereby Congress grants the author of an original work an "exclusive Right" for a "limited Tim[e]" in exchange for a dedication to the public thereafter. Given Congress' consistent placement of existing copyright holders in parity with future holders, the author of a work created in the last 170 years would reasonably comprehend, as the protection offered her, a copyright not only for the time in place when protection is gained, but also for any renewal or extension legislated during that time. *Sears, Roebuck & Co.* v. *Stiffel Co.,* 376 U.S. 25, 229, and *Bonito Boats, Inc.* v. *Thunder Craft Boats, Inc.,* 489 U.S. 141, 146, both of which involved the federal patent regime, are not to the contrary, since neither concerned the extension of a patent's duration nor suggested that such an extension might be constitutionally infirm. Furthermore, given crucial distinctions between patents and copyrights, one cannot extract from language in the Court's patent decisions–language not trained on a grant's duration–genuine support for petitioners' *quid pro quo* argument. Patents and copyrights do not entail the same exchange, since immediate disclosure is not the objective of, but is *exacted from*, the patentee, whereas disclosure is the desired objective of the author seeking copyright protection. Moreover, while copyright gives the holder no monopoly on any knowledge, fact, or idea, the grant of a patent prevents full use by others of the inventor's knowledge. Pp. 20-27.

The "congruence and proportionality" standard of review described in cases evaluating exercises of Congress' power under §5 of the Fourteenth Amendment has never been applied outside the §5 context. It does not hold sway for judicial review of legislation enacted, as copyright laws are, pursuant to Article I authorization. Section 5 authorizes Congress to "enforce" commands contained in and incorporated into the Fourteenth Amendment. The Copyright Clause, in contrast, empowers Congress to *define* the scope of the substantive right. See *Sony,* 464 U.S., at 429. Judicial deference to such congressional definition is "but a corollary to the grant to Congress of any Article I power." *Graham* v. *John Deere Co. of Kansas City,* 383 U.S. 1, 6. It would be no more appropriate for this Court to subject the CTEA to "congruence and proportionality" review than it would be to hold the Act unconstitutional *per se*. Pp. 27-28.

The CTEA's extension of existing and future copyrights does not violate the First Amendment. That Amendment and the Copyright Clause were adopted close in time. This proximity indicates the Framers' view that copyright's limited monopolies are compatible with free speech principles. In addition, copyright law contains built-in First Amendment accommodations. See *Harper & Row,* 471 U.S., at 560. First, 17 U.S.C. § 102(b), which makes only expression, not ideas, eligible for copyright protection, strikes a definitional balance between the First Amendment and copyright law by permitting free communication of facts while still protecting an author's expression. *Harper & Row*, 471 U.S., at 556. Second, the "fair use" defense codified at §107 allows the public to use not only facts and ideas contained in a copyrighted work, but also expression itself for limited purposes. "Fair use" thereby affords considerable latitude for scholarship and comment, *id.,* at 560, and even for parody, see *Campbell* v. *Acuff-Rose Music, Inc.,* 510 U.S. 569. The CTEA itself supplements these traditional First Amendment safeguards in two prescriptions: The first allows libraries and similar institutions to reproduce and distribute copies of certain published works for scholarly purposes during the last 20 years of any copyright term, if the work is not already being exploited commercially and further copies are unavailable at a reasonable price, §108(h); the second exempts small businesses from having to pay performance royalties on music played from licensed radio, television, and similar facilities, §110(5)(B). Finally, petitioners' reliance on *Turner Broadcasting System, Inc.* v. *FCC,* 512 U.S. 622, 641, is misplaced. *Turner Broadcasting* invalidated a statute requiring cable television operators to carry and transmit broadcast stations through their proprietary cable systems.

The CTEA, in contrast, does not oblige anyone to reproduce another's speech against the carrier's will. Instead, it protects authors' original expression from unrestricted exploitation. The First Amendment securely protects the freedom to make–or decline to make–one's own speech; it bears less heavily when speakers assert the right to make other people's speeches. When, as in this case, Congress has not altered the traditional contours of copyright protection, further First Amendment scrutiny is unnecessary. See, *e.g., Harper & Row*, 471 U.S., at 560. Pp. 28-31.

Kahle v. Ashcroft United States District Court For The Northern District Of California, 72 U.S.P.Q.2D (BNA) 1888

Decided on November 19, 2004

Constitutionality of Copyright Renewal Act of 1992 (CRA), the Sonny Bono Copyright Term Extension Act (CTEA)

Plaintiffs, an internet archive company, its chairman, a film archive company, and its president, sued defendant, the Attorney General of the United States, challenging the constitutionality of the Copyright Renewal Act of 1992 (CRA), the Sonny Bono Copyright Term Extension Act (CTEA), the Copyright Act of 1976 (1976 Act), and the Berne Convention Implementation Act (BCIA). The Attorney General moved to dismiss this petition

The companies, chairman, and president claimed, inter alia, that the CTEA violated U.S. Const. art. I, § 8, cl. 8 and U.S. Const. amend. I. The court initially held that the CTEA and the CRA did not violate the "limited times" clause under U.S. Const. art. I, § 8, cl. 8 by creating a copyright term that was effectively perpetual because the CTEA's baseline copyright term of life plus 95 years qualified as a "limited time," and the CRA had a shorter copyright term than the CTEA. The court then held that the 1976 Act, the BCIA, and the CRA did not violate the "progress of science" clause under U.S. Const. art. I, § 8, cl. 8 because Congress had a rational basis for its determination that the changes to copyright law in the 1976 Act, the BCIA, and the CRA promoted the progress of science by rewarding authors for their creative work. The court finally held that the changes to the formal copyright registration, renewal, deposit, and notice requirements under the CTEA and CRA did not violate U.S. Const. amend. I because those changes did not alter the traditional contours of copyright protection. So Ashcroft's motion to dismiss is GRANTED, and the complaint is DISMISSED, in its entirety.

MAZER v. STEIN, US Supreme Court, 347 U.S. 201 (1954)

Decided on March 8, 1954

Certiorari To The United States Court Of Appeals For The Fourth Circuit

Whether patentability of an item bars its copyright as a work of art

Petitioners, manufacturers and sellers of lamps, sought review of a judgment of the United States Court of Appeals for the Fourth Circuit that held that respondents had a valid copyright in statuettes it copyrighted as works of art and, subsequently, used as bases for table lamps it manufactured and sold.

Respondents copyrighted statuettes as works of art and later used the statuettes as table lamp bases it manufactured and sold. The Court affirmed the order declaring that the copyright was valid. The subsequent use of a copyrighted work of art in the manufacturing of lamps did not affect respondents' right to be protected against infringement of the work of art itself. Legislative history of the copyright act and the practice of the copyright agency showed that works of art and reproductions of works of art were intended by Congress to be copyrighted. The statuettes were original tangible expressions of an author's ideas. The reproduction of the statuettes as table lamp bases did not bar or invalidate the statuettes' registration. Nothing in the copyright statute supported the argument that the intended use of an article barred or invalidated registration. The Court also held that the use of a work of art as an element in a manufactured article was not a misuse of the copyright. **The Court affirmed and held that respondents' copyright was valid** because the statuettes were original expressions of an author's ideas and the subsequent use of the statuettes as lamp bases did not invalidate the copyright.

NICHOLS v. UNIVERSAL PICTURES CORPORATION et al.

US Court of Appeals for 2nd Circuit, 1930 U.S. App. LEXIS 3587

Decided on November 10, 1930

Appeal from the District Court of the United States for the Southern District of New York.

Copyright infringement/ concept of abstraction

Summary **:**

(Plaintiff author appealed a decree from the United States District Court for the Southern District of New York, which concluded that defendant producer's motion picture did not infringe upon plaintiff's copyright in a play. Plaintiff alleged that the copyright in her play, concerning a marriage between a Jewish man and an Irish woman and the resulting difficulties between both families, was infringed by defendant's movie about the marriage of an Irish man and a Jewish woman, also focusing on differences between their families. The court affirmed the judgment for defendant, finding the two stories were different as to incident and character, and thus there was no infringement. As for plots, the only matter common to the two was a quarrel between a Jewish father and an Irish father, the marriage of their children, the birth of grandchildren, and a reconciliation. The court found such theme was only a part of plaintiff's ideas, and therefore was not copyrightable. Only four characters were common to both stories; two were "no more than stage properties," while there were numerous differences between representations of the other two. The decree was affirmed)

FULL TEXT

The plaintiff is the author of a play, "Abie's Irish Rose," which it may be assumed was properly copyrighted under section five, subdivision (d), of the Copyright Act, 17 USCA § 5(d). The defendant produced publicly a motion picture play, "The Cohens and The Kellys," which the plaintiff alleges was taken from it. As we think the defendant's play too unlike the plaintiff's to be an infringement, we may assume, arguendo, that in some details the defendant used the plaintiff's play, as will subsequently appear, though we do not so decide. It therefore becomes necessary to give an outline of the two plays.

"Abie's Irish Rose" presents a Jewish family living in prosperous circumstances in New York. The father, a widower, is in business as a merchant, in which his son and only child helps him. The boy has philandered with young women, who to his father's great disgust have always been Gentiles, for he is obsessed with a passion that his daughter-in-law shall be an orthodox Jewess. **[**2]** When the play opens the son, who has been courting a young Irish Catholic girl, has already married her secretly before a Protestant minister, and is concerned to soften the blow for his father, by securing a favorable impression of his bride, while concealing her faith and race. To accomplish this he introduces her to his father at his home as a Jewess, and lets it appear that he is interested in her, though he conceals the marriage. The girl somewhat reluctantly falls in with the plan; the father takes the bait, becomes infatuated with the girl, concludes that they must marry, and assumes that of course they will, if he so decides. He calls in a rabbi, and prepares for the wedding according to the Jewish rite.

Meanwhile the girl's father, also a widower, who lives in California, and is as intense in his own religious antagonism as the Jew, has been called to New York, supposing that his daughter is to marry an Irishman and a Catholic. Accompanied by a priest, he arrives at the house at the moment when the marriage is being celebrated, but too late to prevent it, and the two fathers, each infuriated by the proposed union of his child to a heretic, fall into unseemly and grotesque **[**3]** antics. The priest and the rabbi become friendly, exchange trite sentiments about religion, and agree that the match is good. Apparently out of abundant caution, the priest celebrates the marriage for a third time, while the girl's father is inveigled away. The second act closes with each father, still outraged, seeking to find some way by which the union, thus trebly insured, may be dissolved.

The last act takes place about a year later, the young couple having meanwhile been abjured by each father, and left to their own resources. They have had twins, a boy and a girl, but their fathers know no more than that a child has been born. At Christmas each, led by his craving to see his grandchild, goes separately to the young folks' home, where they encounter each other, each laden with gifts, one for a boy, the other for a girl. After some slapstick comedy, depending upon the insistence of each that he is right about the sex of the grandchild, they become reconciled when they learn the truth, and that each child is to bear the given name of a grandparent. The curtain falls as the fathers are exchanging amenities, and the Jew giving evidence of an abatement in the strictness of **[**4]** his orthodoxy.

"The Cohens and The Kellys" presents two families, Jewish and Irish, living side by side in the poorer quarters of New York in a state of perpetual enmity. The wives in both cases are still living, and share in the mutual animosity, as do two small sons, and even the respective dogs. The Jews have a daughter, the Irish a son; the Jewish father is in the clothing business; the Irishman is a policeman. The children are in love with each other, and secretly marry, apparently after the play opens. The Jew, being in great financial straits, learns from a lawyer that he has fallen heir to a large fortune from a great-aunt, and moves into a great house, fitted luxuriously. Here he and his family live in vulgar ostentation, and here the Irish boy seeks out his Jewish bride, and is chased away by the angry father. The Jew then abuses the Irishman over the telephone, and both become hysterically excited. The extremity of his feelings makes the Jew sick, so that he must go to Florida for a rest, just before which the daughter discloses her marriage to her mother.

On his return the Jew finds that his daughter has borne a child; at first he suspects the lawyer, but eventually **[**5]** learns the truth and is overcome with anger at such a low alliance. Meanwhile, the Irish family who have been forbidden to see the grandchild, go to the Jew's house, and after a violent scene between the two fathers in which the Jew disowns his daughter, who decides to go back with her husband, the Irishman takes her back with her baby to his own poor lodgings. **[*121]** The lawyer, who had hoped to marry the Jew's daughter, seeing his plan foiled, tells the Jew that his fortune really belongs to the Irishman, who was also related to the dead woman, but offers to conceal his knowledge, if the Jew will share the loot. This the Jew repudiates, and, leaving the astonished lawyer, walks through the rain to his enemy's house to surrender the property. He arrives in great dejection, tells the truth, and abjectly turns to leave. A reconciliation ensues, the Irishman agreeing to share with him equally. The Jew shows some interest in his grandchild, though this is at most a minor motive in the reconciliation, and the curtain falls while the two are in their cups, the Jew insisting that in the firm name for the business, which they are to carry on jointly, his name shall stand first. **[**6]**

It is of course essential to any protection of literary property, whether at common-law or under the statute, that the right cannot be limited literally to the text, else a plagiarist would escape by immaterial variations. That has never been the law, but, as soon as literal appropriation ceases to be the test, the whole matter is necessarily at large, so that, as was recently well said by a distinguished judge, the decisions cannot help much in a new case. Fendler v. Morosco, 253 N.Y. 281, 292, 171 N.E. 56. When plays are concerned, the plagiarist may excise a separate scene [Daly v. Webster, 56 F. 483 (C.C.A. 2); Chappell v. Fields, 210 F. 864 (C.C.A. 2); Chatterton v. Cave, L.R. 3 App. Cas. 483]; or he may appropriate part of the dialogue (Warne v. Seebohm, L.R. 39 Ch. D. 73). Then the question is whether the part so taken is "substantial," and therefore not a "fair use" of the copyrighted work; it is the same question as arises in the case of any other copyrighted work. Marks v. Feist, 290 F. 959 (C.C.A. 2); Emerson v. Davies, Fed. Cas. No. 4436, 3 Story, 768, 795-797. But when the plagiarist does not take out a block in situ, but an abstract of the whole, decision is more **[**7]** troublesome. Upon any work, and especially upon a play, a great number of patterns of increasing generality will fit equally well, as more and more of the incident is left out. The last may perhaps be no more than the most general statement of what the play is about, and at times might consist only of its title; but there is a point in this series of abstractions where they are no longer protected, since otherwise the playwright could prevent the use of his "ideas," to which, apart from their expression, his property is never extended. Holmes v. Hurst, 174 U.S. 82, 86, 19 S. Ct. 606, 43 L. Ed. 904; Guthrie v. Curlett, 36 F.(2d) 694 (C.C.A. 2). Nobody has ever been able to fix that boundary, and nobody ever can. In some cases the question has been treated as though it were analogous to lifting a portion out of the copyrighted work (Rees v. Melville, MacGillivray's Copyright Cases [1911-1916], 168); but the analogy is not a good one, because, though the skeleton is a part of the body, it pervades and supports the whole. In such cases we are rather concerned with the line between expression and what is expressed. As respects plays, the controversy chiefly centers upon the characters **[**8]** and sequence of incident, these being the substance.

We did not in Dymow v. Bolton, 11 F.(2d) 690, hold that a plagiarist was never liable for stealing a plot; that would have been flatly against our rulings in Dam v. Kirk La Shelle Co., 175 F. 902, 41 L.R.A. (N.S.) 1002, 20 Ann. Cas. 1173, and Stodart v. Mutual Film Co., 249 F. 513, affirming my decision in (D.C.) 249 F. 507; neither of which we meant to overrule. We found the plot of the second play was too different to infringe, because the most detailed pattern, common to both, eliminated so much from each that its content went into the public domain; and for this reason we said, "this mere subsection of a plot was not susceptible of copyright." But we do not doubt that two plays may correspond in plot closely enough for infringement. How far that correspondence must go is another matter. Nor need we hold that the same may not be true as to the characters, quite independently of the "plot" proper, though, as far as we know, such a case has never arisen. If Twelfth Night were copyrighted, it is quite possible that a second comer might so closely imitate Sir Toby Belch or Malvolio as to infringe, but it would not be enough that **[**9]** for one of his characters he cast a riotous knight who kept wassail to the discomfort of the household, or a vain and foppish steward who became amorous of his mistress. These would be no more than Shakespeare's "ideas" in the play, as little capable of monopoly as Einstein's Doctrine of Relativity, or Darwin's theory of the Origin of Species. It follows that the less developed the characters, the less they can be copyrighted; that is the penalty an author must bear for marking them too indistinctly.

In the two plays at bar we think both as to incident and character, the defendant took no more — assuming that it took anything at all — than the law allowed. The stories are quite different. One is of a religious zealot **[*122]** who insists upon his child's marrying no one outside his faith; opposed by another who is in this respect just like him, and is his foil. Their difference in race is merely an obbligato to the main theme, religion. They sink their differences through grandparental pride and affection. In the other, zealotry is wholly absent; religion does not even appear. It is true that the parents are hostile to each other in part because they differ in race; but **[**10]** the marriage of their son to a Jew does not apparently offend the Irish family at all, and it exacerbates the existing animosity of the Jew, principally because he has become rich, when he learns it. They are reconciled through the honesty of the Jew and the generosity of the Irishman; the grandchild has nothing whatever to do with it. The only matter common to the two is a quarrel between a Jewish and an Irish father, the marriage of their children, the birth of grandchildren and a reconciliation.

If the defendant took so much from the plaintiff, it may well have been because her amazing success seemed to prove that this was a subject of enduring popularity. Even so, granting that the plaintiff's play was wholly original, and assuming that novelty is not essential to a copyright, there is no monopoly in such a background. Though the plaintiff discovered the vein, she could not keep it to herself; so defined, the theme was too generalized an abstraction from what she wrote. It was only a part of her "ideas."

Nor does she fare better as to her characters. It is indeed scarcely credible that she should not have been aware of those stock figures, the low comedy Jew and Irishman. **[**11]** The defendant has not taken from her more than their prototypes have contained for many decades. If so, obviously so to generalize her copyright, would allow her to cover what was not original with her. But we need not hold this as matter of fact, much as we might be justified. Even though we take it that she devised her figures out of her brain de novo, still the defendant was within its rights.

There are but four characters common to both plays, the lovers and the fathers. The lovers are so faintly indicated as to be no more than stage properties. They are loving and fertile; that is really all that can be said of them, and anyone else is quite within his rights if he puts loving and fertile lovers in a play of his own, wherever he gets the cue. The plaintiff's Jew is quite unlike the defendant's. His obsession is his religion, on which depends such racial animosity as he has. He is affectionate, warm and patriarchal. None of these fit the defendant's Jew, who shows affection for his daughter only once, and who has none but the most superficial interest in his grandchild. He is tricky, ostentatious and vulgar, only by misfortune redeemed into honesty. Both are grotesque, **[**12]** extravagant and quarrelsome; both are fond of display; but these common qualities make up only a small part of their simple pictures, no more than any one might lift if he chose. The Irish fathers are even more unlike; the plaintiff's a mere symbol for religious fanaticism and patriarchal pride, scarcely a character at all. Neither quality appears in the defendant's, for while he goes to get his grandchild, it is rather out of a truculent determination not to be forbidden, than from pride in his progeny. For the rest he is only a grotesque hobbledehoy, used for low comedy of the most conventional sort, which any one might borrow, if he chanced not to know the exemplar.

The defendant argues that the case is controlled by my decision in Fisher v. Dillingham (D.C.) 298 F. 145. Neither my brothers nor I wish to throw doubt upon the doctrine of that case, but it is not applicable here. We assume that the plaintiff's play is altogether original, even to an extent that in fact it is hard to believe. We assume further that, so far as it has been anticipated by earlier plays of which she knew nothing, that fact is immaterial. Still, as we have already said, her copyright did not cover **[**13]** everything that might be drawn from her play; its content went to some extent into the public domain. We have to decide how much, and while we are as aware as any one that the line, whereever it is drawn, will seem arbitrary, that is no excuse for not drawing it; it is a question such as courts must answer in nearly all cases. Whatever may be the difficulties a priori, we have no question on which side of the line this case falls. A comedy based upon conflicts between Irish and Jews, into which the marriage of their children enters, is no more susceptible of copyright than the outline of Romeo and Juliet.

The plaintiff has prepared an elaborate analysis of the two plays, showing a "quadrangle" of the common characters, in which each is represented by the emotions which he discovers. She presents the resulting parallelism as proof of infringement, but the adjectives employed are so general as to be quite useless. Take for example the attribute of "love" ascribed to both Jews. The plaintiff has depicted her father as deeply attached **[*123]** to his son, who is his hope and joy; not so, the defendant, whose father's conduct is throughout not actuated by any affection for his **[**14]** daughter, and who is merely once overcome for the moment by her distress when he has violently dismissed her lover. "Anger" covers emotions aroused by quite different occasions in each case; so do "anxiety," "despondency" and "disgust." It is unnecessary to go through the catalogue for emotions are too much colored by their causes to be a test when used so broadly. This is not the proper approach to a solution; it must be more ingenuous, more like that of a spectator, who would rely upon the complex of his impressions of each character.

We cannot approve the length of the record, which was due chiefly to the use of expert witnesses. Argument is argument whether in the box or at the bar, and its proper place is the last. The testimony of an expert upon such issues, especially his cross-examination, greatly extends the trial and contributes nothing which cannot be better heard after the evidence is all submitted. It ought not to be allowed at all; and while its admission is not a ground for reversal, it cumbers the case and tends to confusion, for the more the court is led into the intricacies of dramatic craftsmanship, the less likely it is to stand upon the firmer, if more naive, **[**15]** ground of its considered impressions upon its own perusal. We hope that in this class of cases such evidence may in the future be entirely excluded, and the case confined to the actual issues; that is, whether the copyrighted work was original, and whether the defendant copied it, so far as the supposed infringement is identical. Decree affirmed.

Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc., US Court of Appeals for 3rd circuit, 797 F.2d 1222

Decided on August 4, 1986

Appeal from the United States District Court for the Eastern District of Pennsylvania

Infringement of Computer programs: Non Literal Copying (Structure, sequence and organization of the programme)

Appellants, a dental prosthetics manufacturer, a computer program developer, and shareholders, sought review of a United States District Court for the Eastern District of Pennsylvania decision holding that structural, non-literal elements of a computer program for the operation of a dental laboratory were protected under the copyright laws, and that appellants committed copyright infringement with its substantially similar computer program. Appellants challenged a trial court decision holding that a computer program developed by appellee, a custom computer programmer, for a dental laboratory operation was protected under applicable copyright laws, after finding that the program's structure, and not just its literal code, was protected. Appellants argued that there was insufficient evidence that the parties' programs were substantially similar. The court affirmed the decision of the trial court, holding that there was sufficient evidence of substantial similarity between the parties' programs. The court held that the structure, sequence, and organization of appellants' program was substantially similar to the overall structure of appellee's program, and such proof was sufficient to recover for copyright infringement despite appellee's failure to allege that appellants copied its source or object codes. There was sufficient evidence of substantial similarity between the file structures of the programs, screen outputs, and subroutines to support a finding of infringement.

The court affirmed the trial court's decision, holding that appellee's computer program was protected, as the copyright covered the structure of the program and not just the program's literal elements, such as source and object codes. Appellants infringed on appellee's copyright where substantial similarity existed between the parties' programs.

This decision has been overruled by Computer Associate v. Altai in 1992

Harper & Row, Publishers, Inc. v. Nation Enterprises. US Supreme Court, 471 U.S. 539

Decided on May 20, 1985

Certiorari To The United States Court Of Appeals For The Second Circuit

DOCTRINE OF FAIR USE

Petitioners sought review of a judgment of the United States Court of Appeals for the Second Circuit which was entered in favor of respondents on a finding that respondents did not infringe petitioners' copyright because use of the material was excused by the public's interest in the subject matter and by a finding that the fair use defense was established under the Copyright Act.

Petitioners alleged that the lower court erred in ruling in favor of respondents and holding that respondents did not infringe upon petitioners' copyright because use of the material was excused by the public's interest in the subject matter and by a finding that the fair use defense was established. Reversing the judgment, the court held that respondents failed to establish that their unauthorized use of quotations from a public figure's unpublished manuscript was sanctioned by the fair use doctrine. Respondents admitted to lifting verbatim quotes. The unpublished nature of book was a key factor that negated the defense of fair use. The court found that four statutory factors relevant to determining whether the use was fair were not satisfied. Respondents use had the intended purpose of supplanting copyright holder's commercially valuable right of first publication. The use infringed upon the copyright holder's interest in confidentiality and creative control. Respondents took what was essentially the heart of the book and copied much of it verbatim. Finally, the use of copyrighted material had an actual effect on the market for first rights to publish excerpts from the book.

The **Supreme Court reversed the appellate court judgement,** and held that respondents' unauthorized use of quotations from a public figure's unpublised manuscript was not sanctioned by the Copyright Act's fair use doctrine.

Lotus Dev. Corp. v. Borland Int'l, Court of Appeals for the 1st Circuit, 49 F.3d 807

Decided on 9th March 1995

Appeal From The United States District Court For The District Of Massachusetts

COPYRIGHT PROTECTION FOR USER INTERFACES, MENU COMMAND HIERARCHY

Defendant appealed an order of the United States District Court for the District of Massachusetts granting plaintiff partial summary judgment in a copyright case. Plaintiff sued defendant, alleging copyright infringement. The district court granted plaintiff partial summary judgment, finding that plaintiff's computer menu command hierarchy was a copyrightable expression. The court reversed, holding that plaintiff's menu command hierarchy was uncopyrightable subject matter. The court held that the menu was not copyrightable because it was a method of operation and, therefore, was foreclosed from copyright protection by 17 U.S.C.S. § 102(b). The **court held** that plaintiff's menu command hierarchy was **uncopyrightable subject matter** because it was a method of operation and, therefore, was foreclosed from copyright protection.

Although this case was appealed before the US Supreme Court, an equally divided Court in 1996 affirmed the judgment of the Court of Appeals. The Supreme Court was equally divided, as one judge did not take part in the consideration or decision of this case. (**Citation 1996 U.S. LEXIS 470**)

Herbert Rosenthal Jewelry Corp. v. Kalpakian, US Court of Appeals for 9th Circuit, 446 F.2d 738

Decided on 7th July 1971.

Appeal against the judgment of United States District court

MERGER DOCTRINE/ IDEA EXPRESSION DICHOTOMY

Summary :

(Plaintiff alleged that defendants infringed its copyrighted jewel encrusted bee pin. The lower court found that defendants' bee pin was not substantially similar to plaintiff's bees and that they had not infringed the copyright. On appeal, the court affirmed. The court noted the difference between a patent and a copyright was that a copyright conferred no right to the conception reflected in the general subject matter and just protected the expression of the idea, not the idea itself. The court determined that a copyright must not be treated like a patent or it would confer rights over private activity without satisfying the procedural and substantive prerequisites to the grant of such privilege. The court reasoned that defendants were entitled to use the idea of a jeweled bee but were not able to copy plaintiff's expression of that bee. However, the court found that, because the idea of the bee and its jeweled expression were inseparable, copying the expression was not barred. The court affirmed the judgment in defendants' favor because defendants were not barred from copying the expression of plaintiff's copyrighted bee pin when the idea of the bee and its expression were inseparable)

FULL TEXT

Plaintiff and defendants are engaged in the design, manufacture, and sale of fine jewelry. Plaintiff charged defendants with infringing plaintiff's copyright registration of a pin in the shape of a bee formed of gold encrusted with jewels. A consent decree was entered, reciting that the parties had agreed to a settlement of the action and entry of the decree. It provided that plaintiff's copyright of the jeweled bee was "good and valid in law," that defendants had manufactured a jeweled bee "alleged to be similar," and that defendants were enjoined from infringing plaintiff's copyright and from manufacturing or selling copies of plaintiff's jeweled bee pin.

Later plaintiff filed a motion for an order holding defendants in contempt of the consent decree. The district court, after an evidentiary hearing, found that while defendants had manufactured and sold a line of jeweled bee pins, they designed their pins themselves after a study of bees in nature and in published works and did not copy plaintiff's copyrighted bee. The court further found that defendants' **[**2]** jeweled bees were "not substantially similar" to plaintiff's bees, except that both "do look like bees." The court concluded that defendants had neither infringed plaintiff's copyright nor violated the consent decree, and entered a judgment order denying plaintiff's motion. We affirm.

Both in this court and below, the parties have assumed that defendants are bound by their concession of the validity of plaintiff's copyright in the consent decree. Although we accept that assumption for purposes of this litigation, we expressly save the question **[*740]** whether the line of cases upon which the assumption is based, *see* Siebring v. Hansen, 346 F.2d 474, 477 (8th Cir. 1965), and cases cited, survived Lear, Inc. v. Adkins, 395 U.S. 653, 89 S. Ct. 1902, 23 L. Ed. 2d 610 (1969), and in this circuit, Massillon-Cleveland-Akron Sign Co. v. Golden State Advertising Co., 444 F.2d 425 (9th Cir. 1971). *See also*, Blonder-Tongue Laboratories, Inc. v. University of Illinois Foundation, 402 U.S. 313, 91 S. Ct. 1434, 28 L. Ed. 2d 788 (1971).

Plaintiff contends that its copyright registration of a jeweled bee entitles it **[**3]** to protection from the manufacture and sale by others of any object that to the ordinary observer is substantially similar in appearance. The breadth of this claim is evident. For example, while a photograph of the copyrighted bee pin attached to the complaint depicts a bee with nineteen small white jewels on its back, plaintiff argues that its copyright is infringed by defendants' entire line of a score or more jeweled bees in three sizes decorated with from nine to thirty jewels of various sizes, kinds, and colors.

Although plaintiff's counsel asserted that the originality of plaintiff's bee pin lay in a particular arrangement of jewels on the top of the pin, the elements of this arrangement were never identified. Defendants' witnesses testified that the "arrangement" was simply a function of the size and form of the bee pin and the size of the jewels used. Plaintiff's counsel, repeatedly pressed by the district judge, was unable to suggest how jewels might be placed on the back of a pin in the shape of a bee without infringing plaintiff's copyright. He eventually conceded, "not being a jeweler, I can't conceive of how he might rearrange the design so it is dissimilar." **[**4]**

If plaintiff's understanding of its rights were correct, its copyright would effectively prevent others from engaging in the business of manufacturing and selling jeweled bees. We think plaintiff confuses the balance Congress struck between protection and competition under the Patent Act and the Copyright Act.

The owner of a patent is granted the exclusive right to exploit for a period of seventeen years (a maximum of fourteen years for design patents) the conception that is the subject matter of the patent. 35 U.S.C. §§ 154, 173. The grant of this monopoly, however, is carefully circumscribed by substantive and procedural protections.To be patentable the subject matter must be new and useful, and represent a nonobvious advance — one requiring "more ingenuity and skill than that possessed by an ordinary mechanic acquainted with the business"; an advance that would not be obvious to a hypothetical person skilled in the art and charged with knowledge of all relevant developments publicly known to that point in time. Graham v. John Deere Co., 383 U.S. 1, 86 S. Ct. 684, 15 L. Ed. 2d 545 (1966). **[**5]** A patent is granted only after an independent administrative inquiry and determination that these substantive standards have been met. This determination is subject to both administrative and court review. 35 U.S.C. §§ 134, 141, 145, 146.

Copyright registration, on the other hand, confers no right at all to the conception reflected in the registered subject matter. Unlike a patent, a copyright gives no exclusive right to the art disclosed; protection is given only to the expression of the idea — not the idea itself." Mazer v. Stein, 347 U.S. 201, 217, 74 S. Ct. 460, 470, 98 L. Ed. 630 (1954) (footnote omitted). Accordingly, the prerequisites for copyright registration are minimal. The work offered for registration need only be the product of the registrant. So long as it is not a plagiarized copy of another's effort, there **[**6]** is no requirement that the work differ substantially from prior works or that it contribute anything of value. The copyright protects originality rather than novelty or invention." *Id.* at 218, 74 S. Ct. at 471. A copyright is secured simply by publishing the work with the required notice, 17 U.S.C. § 10, and registration **[*741]** is accomplished simply by filing a claim and depositing copies of the work with the Register of Copyrights, 17 U.S.C. §§ 11, 13. There is no administrative investigation or determination of the validity of the claim. A certificate is refused only if the object falls outside the broad category of matter subject to copyright registration. A copyright affords little protection. It confers "only 'the sole right of multiplying copies.' Absent copying there can be no infringement **[**7]** of copyright." Mazer v. Stein, *supra*, 347 U.S. at 218, 74 S. Ct. at 471 (footnotes omitted). Because the registrant's protection is limited and the social cost therefore small, the life of the copyright is long and, under current proposals, potentially even longer — now twenty-eight years plus a renewal period of twenty-eight more, 17 U.S.C. § 24, and, under Copyright Revision Bill § 543, 91st Congress, 1st Session, the life of the author plus fifty years.

Obviously a copyright must not be treated as equivalent to a patent lest long continuing private monopolies be conferred over areas of gainful activity without first satisfying the substantive and procedural prerequisites to the grant of suchprivileges.

Because copyright bars only copying, perhaps this case could be disposed of on the district court's finding that defendants did not copy plaintiff's bee pin. It is true that defendants had access to plaintiff's pin and that there is an obvious similarity between plaintiff's pin and those of defendants. These two facts constitute strong circumstantial **[**8]** evidence of copying. But they are not conclusive, Nimmer on Copyright §§ 139.4, 141.2, and there was substantial evidence to support the trial court's finding that defendants' pin was in fact an independent creation. Defendants testified to independent creation from identified sources other than plaintiff's pin. The evidence established defendants' standing as designers of fine jewelry and reflected that on earlier occasions they had designed jeweled pins in the form of living creatures other than bees, including spiders, dragonflies, and other insects, birds, turtles, and frogs. Any inference of copying based upon similar appearance lost much of its strength because both pins were lifelike representations of a natural creature. Moreover, there were differences between defendants' and plaintiff's bees — notably in the veining of the wings.

Although this evidence would support a finding that defendants' bees were their own work rather than copied from plaintiff's, this resolution of the problem is not entirely satisfactory, particularly in view of the principle that copying need not be conscious, but "may be the result of subconscious memory derived from hearing, seeing or reading the copyrighted work at some time in the past." Howell's Copyright Law 129 (4th ed. 1962). *See* Sheldon v. MetroGoldwyn Pictures Corp., 81 F.2d 49, 54 (2d Cir. 1936); Harold Lloyd Corp. v. Witwer, 65 F.2d 1, 16 (9th Cir. 1933). It seems unrealistic to suppose that defendants could have closed their minds to plaintiff's highly successful jeweled bee pin as they designed their own.

A finding that defendants "copied" plaintiff's pin in this sense, however, would not necessarily justify judgment against them. A copyright, we have seen, bars use of the particular "expression" of an idea in a copyrighted work but does not bar use of the "idea" itself. Others are free to utilize the "idea" so long as they do not plagiarize its "expression." As the court said in Trifari, Krussman & Fishel, Inc. v. B. Steinberg-Kaslo Co., 144 F. Supp. 577, 580 (S.D.N.Y.1956), where the copyrighted work **[**10]** was a jeweled pin representing a hansom cab, "though an alleged infringer gets the idea of a hansom cab pin from a copyrighted article there can be no infringement unless the article itself has been copied. The idea of a hansom cab cannot be copyrighted. Nevertheless plaintiff's expression of that idea, as embodied in its pin, can be copyrighted." Or as Judge Hand put **[*742]** it in Sheldon v. Metro-Goldwyn Pictures Corp., *supra*, 81 F.2d at 54, "defendants were entitled to use, not only all that had gone before, but even the plaintiffs' contribution itself, if they drew from it only the more general patterns; that is, if they kept clear of its 'expression.'" *See also* Millworth Converting Corp. v. Slifka, 276 F.2d 443, 445 (2d Cir. 1960).

The critical distinction between "idea" and "expression" is difficult to draw. As Judge Hand candidly wrote, "Obviously, no principle can be stated as to when an imitator has gone beyond copying the 'idea,' and has borrowed its 'expression.'" Peter Pan Fabrics, Inc. v. Martin Weiner Corp., 274 F.2d 487, 489 (2d Cir. 1960). At least in close cases, one may suspect, the classification the court **[**11]** selects may simply state the result reached rather than the reason for it. In our view, the difference is really one of degree as Judge Hand suggested in his striking "abstraction" formulation in Nichols v. Universal Pictures Corp., 45 F.2d 119, 121 (2d Cir. 1930). The guiding consideration in drawing the line is the preservation of the balance between competition and protection reflected in the patent and copyright laws.

What is basically at stake is the extent of the copyright owner's monopoly — from how large an area of activity did Congress intend to allow the copyright owner to exclude others? We think the production of jeweled bee pins is a larger private preserve than Congress intended to be set aside in the public market without a patent. A jeweled bee pin is therefore an "idea" that defendants were free to copy. Plaintiff seems to agree, for it disavows any claim that defendants cannot manufacture and sell jeweled bee pins and concedes that only plaintiff's particular design or "expression" of the jeweled bee pin "idea" is protected under its copyright. The difficulty, as we have noted, is that on this record the "idea" and its "expression" appear to be **[**12]** indistinguishable. There is no greater similarity between the pins of plaintiff and defendants than is inevitable from the use of jewel-encrusted bee forms in both.

When the "idea" and its "expression" are thus inseparable, copying the "expression" will not be barred, since protecting the "expression" in such circumstances would confer a monopoly of the "idea" upon the copyright owner free of the conditions and limitations imposed by the patent law. Baker v. Selden, 101 U.S. 99, 103, 25 L. Ed. 841 (1879); Morrissey v. Procter & Gamble Co., 379 F.2d 675, 678-679 (1st Cir. 1967); Crume v. Pacific Mut. Life Ins. Co., 140 F.2d 182, 184 (7th Cir. 1944). *See also* Continental Cas. Co. v. Beardsley, 253 F.2d 702, 705-706 (2d Cir. 1958). **Thus the present appeal failed.**

A.A. HOEHLING v. UNIVERSAL CITY STUDIOS, INC
United States Court of Appeals for Second Circuit, 618 F.2d 972

Decided on 25th March 1980.

Appeal against the United States District Court for the Southern District of New York

SCENES A FAIRE DOCTRINE

Suit was instituted for alleged infringement of copyright. The Court of Appeals, held that historical interpretation, which was contained in copyrighted work concerning the triumphant introduction, last voyage and tragic destruction of the Hindenburg, the colossal dirigible constructed in Germany during Hitler's reign, and which contained hypothesis that a "rigger" on the Hindenburg crew sabotaged the Hindenburg to please his lady friend, a suspected communist dedicated to exploding the myth of Nazi invincibility, whether or not such interpretation originated with plaintiff, was not protected by his copyright and could be freely used by subsequent authors such as individual and corporate defendants. Court held that "incidents, characters or settings which are as a practical matter indispensable, or at least standard, in the treatment of a given topic" cannot be protected under the laws of copyright.

PATENT CASES

Patent Cases U.K. & E.U.

Biogen Inc v Medeva Plc
(HL) House of Lords

31 October 1996

[1997] R.P.C. 1

INVENTIVE STEP

In 1978 B applied for a UK patent of their method of using genetic engineering techniques to produce the antigens of the hepatitis B virus which could then be used to diagnose the disease and to produce vaccines against infection. This application was the basis of a claim to priority in their application for a European patent in 1979. B claimed that M had infringed their patent by proposing to market a hepatitis B vaccine which also relied on genetic engineering methods. M counterclaimed that the patent should be revoked because: (1) the claimed invention had been obvious at the time when the UK patent was applied for and when the European patent was applied for, contrary to the Patents Act 1977 s. 1(1)(b) and s. 3; (2) the material disclosed by B did not support the invention claimed in the patent as required by s. 5(2)(a) of the Act and therefore B was not entitled to priority with respect to the European patent; (3) the patent claimed was not an invention within the meaning of s. 1(1), and (4) the description claimed in the patent was not sufficient under s. 72(1)(c). The Court of Appeal overturned judgment in favour of B and B appealed.

Summary: Held, dismissing the appeal, that in order to decide whether a development was inventive, it was necessary to examine the state of the article at the time that the patent was applied for. The court was prepared to assume that B's method of producing the antigens was not obvious to those skilled in genetic engineering techniques in 1978. However, B's disclosure did not support what was claimed in the patent in that it purported to cover methods of producing antigens that did not rely on any of the principles or teaching of B's invention. B had been the first to make hepatitis antigens using their method but this did not justify giving B a monopoly over all methods of doing so as this would discourage competition and research which might lead to further valuable developments. B was therefore not entitled to the priority with regard to the European patent as they had already conceded that its development was obvious when that application was filed in 1979.

Catnic Components Ltd v Hill & Smith Ltd (No.1)
(HL) House of Lords

27 November 1980

[1981] F.S.R. 60

INFRINGEMENT; DOCTRINE OF "PITH AND MARROW"

The plaintiffs were proprietors of a patent for steel lintels. The defendants copied and manufactured it. The defendants then produced a second form of lintel, which differed slightly. The plaintiffs brought a second action in respect of this lintel, and further included a claim for breach of copyright.

Summary: Held, on appeal to the House of Lords, (1) a patent specification should be given a purposive construction; (2) the question was whether persons of relevant practical knowledge and experience would understand that strict compliance was an essential requirement of the patentee; the patent was infringed if it would be apparent to a reader skilled in the art that a descriptive word could not have been intended to exclude minor variants which would have no material effect upon the working of the invention; (3) no breach of copyright had occurred.

Electrolux Ltd v Hudson (Ch D) Chancery Division

7 December 1976

[1977] F.S.R. 312

OWNERSHIP OF PATENTS

Abstract: The 1st defendant and his wife invented, in their spare time, a device whereby any open-mouthed bag could be used in a vacuum cleaner for the collection of dust. They applied for a patent and assigned to the 3rd defendant their rights in the application. The 1st defendant was employed by the plaintiffs as a senior store-keeper. The plaintiffs alleged that they were entitled to the benefit of the invention under the terms of his contract of employment.

Summary: Held, (1) the clause was unenforceable since it referred to inventions relating not only to the plaintiffs' goods but also those of its associated companies outside the UK; (2) the term usually implied into contracts of employment did not apply where the 1st defendant was not employed to invent and the invention was not made in working hours or with the employer's materials; (3) the employee had fulfilled the implied term to serve his firm with good faith and fidelity. (Amplaudio v Snell (1938) 55 R.P.C. 237 considered; Triplex Safety Glass Co v Scorah [1938] Ch. 211 applied).

Fujitsu Ltd's Patent Application (No.9204959.2) (CA) Court of Appeal

6 March 1997

[1997] R.P.C. 608

PATENTABILITY OF COMPUTER SOFTWARE

F appealed against the dismissal of its appeal against the rejection of its patent application for computer software designed to convert data representing the physical layouts of two crystal structures into a representation of the physical layout of the resulting crystal structure when the original two structures were combined. F argued, relying on VICOM/Computer-related invention (T208/84) [1987] E.P.O.R. 74, that its invention was not excluded by the Patents Act 1977 s. 1(2) as it made a technical contribution and methods for processing images of real things were patentable. F further contended that claim 10 of its application was for computer apparatus and claim 9 was for a method of manufacturing a structure, neither of which could be said to relate to a computer program as such, and also pointed to the fact that the application provided a new tool which would relieve chemists of the task of having to build models.

Summary: Held, dismissing the appeal, that (1) the VICOM case did not find that all claims to processing real images were patentable, and each application had to be decided on its own facts; (2) the claims in a patent application had to be looked at as a matter of substance, Gale's Patent Application, Re [1991] R.P.C. 305 considered, and the fact that one of the claims was for computer hardware was irrelevant, and (3) whilst the method developed would be beneficial, the only advance was that the computer program enabled the combined structure to be displayed more quickly. The combined structures were formed as a result of directions given by the operator, who selected the two crystal structures which were then combined by the computer program to produce a pictorial representation of what would previously have been produced as a model. The application was, in essence, a computer program and not a patentable invention.

Genentech Inc's Patent
(Pat Ct) Patents Court

7 July 1987

[1987] R.P.C. 553

NOVELTY, INVENTIVE STEP

Abstract: The patent in suit related to human tissue plasminogen activator, a protein. P had produced this by using recombinant DNA technology to establish the cell line and thereafter, the genetic information was used to make micro- organisms capable of producing t-PA. Petitioners for revocation alleged that the claims did not relate to a patentable invention, and further that the claim was insufficient and also an insufficiency on the ground of a mistake.

Summary: Held, that the patentees had discovered a particular route to a known end. Nevertheless, they were entitled to some patent protection for their work. The broad product claims were, however, invalid and the patent must be revoked in its present form. The other objections to its validity were not made out.

General Tire & Rubber Co v Firestone Tyre & Rubber Co Ltd (No.1) (CA) Court of Appeal

28 July 1971

[1972] R.P.C. 457

INFRINGEMENT

Abstract: In an action for infringement P's patent relating to the making of oil-extended rubber, suitable for the manufacture of tyre treads, was held by the trial judge to be valid and infringed. On appeal, the proceedings turned on the issues of anticipation, obviousness and ambiguity.

Held, (1) that the invention claimed was not anticipated by any of the cited documents, that it was not obvious, and that the objection of ambiguity was not established; (2) that, in determining whether or not a claim had been anticipated by an earlier publication, the publication and the claim had each to be construed as at their respective relevant dates by a reader skilled in the art, which reader could, if the art was one having a highly developed technology, be a team. If the prior publication contained a direction which was capable of being carried out in a manner which could infringe, but would be at least as likely to be carried out in a way which would not do so, the claim would not be anticipated, although it might be obvious; (3) that the question whether a patentee had sufficiently defined the scope of his claims had to be considered in relation to the facts of each case, that allowance was to be made for any difficulties to which the circumstances gave rise, and that all that was required of the patentees was to give as clear a definition as the subject matter admitted of. The definition was not necessarily insufficient, because cases might arise in which it was difficult to decide whether or not there had been an infringement provided that a question could be formulated which the court had to answer in deciding the issue of infringement.

Haberman v Jackel International Ltd (Pat Ct) Patents Court

15 January 1999

[1999] F.S.R. 683

INVENTIVE STEP; COMMERCIAL SUCCESS OF INVENTION RELEVANT IN ASSESSING OBVIOUSNESS

H had patented a non drip trainer cup for use by children which would withstand vigorous shaking and not leak when inverted. H's claim extended to a cup shaped container, the lid of which contained a mouthpiece with a self closing slit valve so that the flow of liquid was prevented unless a predetermined level of suction was applied. J sought to challenge the validity of that patent on the basis of obviousness, arguing that any container of the shape patented by H would fall within the claim and that anything that would fit in the mouth, such as a traditional teat, constituted a mouthpiece.

Summary: Held, granting H leave to amend her patent to make it clear that her cup operated solely by lip pressure and finding the patent, so amended, valid, that, in determining whether the invention of the cup was obvious so as to disentitle H from patenting it, the structured approach set out in Windsurfing International Inc v Tabur Marine (Great Britain) Ltd [1985] R.P.C. 59 was applicable. At the priority date it was common knowledge that slit valves in teats for feeding bottles made them drip resistant and the relevant question was whether, without any knowledge of H's invention, the difference between what H did and the prior art would have been obvious to those skilled in the art. Evidence of the commercial success of the invention could give some insight into the perception of workers in the art at the priority date, and thus into the thought processes of the industry as a whole. Numerous solutions to the leakage problem which the patent sought to solve had been offered but they were complicated and suffered significant disadvantages when compared to H's solution which was cheap, effective, simple and a huge commercial success. On that basis, and in view of the clear benefits which flowed from the invention, the patent was not void for obviousness.

IBM Corp's European Patent Application (No.96305851.6) (T935/97) (EPO (Technical Bd App)) European Patent Office (Technical Board of Appeal)

4 February 1999

[1999] R.P.C. 861

PATENTABILITY OF SOFTWARE, ARE COMPUTER PROGRAM PRODUCTS EXCLUDED FROM PATENTABILITY WHERE THEY PRODUCED A FURTHER TECHNICAL EFFECT?

IBM appealed against a decision of the European Patent Office refusing its application for a European patent to cover a computer program product, on the basis that the subject matter concerned a computer program which was excluded from patentability under the European Patent Convention 1973 Art. 52(2)(c) and (3). IBM's claims were directed towards computer program code which instructed a computer to execute a procedure to display information in a first window, and which could respond to obstruction of that information by a second window.

Held, allowing the appeal, that a computer program product was not excluded from patentability under Art. 52(2)(c) and (3) if it produced, or was capable of producing, a further technical effect beyond the normal physical interaction between the software and hardware. Physical modifications to the hardware resulting from the execution of the instructions given by the program could not, in themselves, provide the technical character necessary to avoid the exclusion, since those were a common feature of computer programs. However, where the further effects derived from the hardware's execution of the instructions given by the program had a technical character or caused the software to solve a technical problem such products could be patentable. Such technical effects were not directly disclosed by the program itself, but could only be seen when the program was run on a computer. By analogy with the reasoning in VICOM/Computer-related invention (T208/84), Re [1987] E.P.O.R. 74, it would be illogical to grant a patent for both a method and the apparatus used to carry out the method, but not for the computer program product which enabled the implementation of the method and which was able to carry out that method when loaded.

98 IBM/Document Abstracting and Retrieving Technical Board of Appeal EPO

5 October 1988

(1990) EPOR 98

INFORMATION STORAGE AND RETRIEVAL-WHETHER PATENTABLE, PRINCIPLES APPLICABLE TO COMPUTER-RELATED INVENTIONS

The application was for a system for automatically abstracting a document and storing the resulting abstract comprising dictionary memory, input means, main memory and processor, characterised in that the processor comprises means for selecting certain language terms by reference to the dictionary memory (such as proper names not in the memory and terms specially identified in the memory) and using the terms thus abstracted to retrieve the document from the terms of an input query.

The application was rejected on the ground that the contribution to the art resided solely in a computer program, which was excluded from patentability, in whatever form it was claimed. The applicant appealed.

Held, dismissing the appeal and rejecting the application:

1. The examples of subject-matter excluded from patentability under EPC Article 52(2)(c) have in common that they refer to activities which do not aim at any direct technical result, but are rather of an abstract and intellectual character.

2. The requirement that an invention must provide a technical contribution to the art is at the basis of long-standing practice in at least the majority of Contracting States of the EPC.

3. The requirement of a technical contribution is further supported by the provisions of EPC Rules 27 and 29, which require definition of the technical field and technical problem in the description, and definition of the technical features of the invention in the characterising portion of a claim.

4. The subject-matter of the application was to be likened to the activities referred to in Article 52(2)(c) and fell within the category of schemes, rules and methods for performing mental acts.

5. Any new concept disclosed in the application could only be in the rules according to which the abstracting, storing and retrieving of documents are performed to establish an information retrieval procedure, which gave satisfactory results, judged by essentially administrative criteria.

6. The claims essentially sought protection for systems and methods in which conventional computer means are controlled by a program so as to carry out abstracting, storing or retrieving of documents in accordance with that set of rules.

*99 **7.** Although the functional interrelationship of the hardware elements figuring in the claims differed from those previously known, it did not define a new way of operating the computer in a technical sense, but rather was the logical consequence of the set of rules, and only expressed the algorithm underlying the required program.

8. Changes in the electrical signals representing the information stored did not qualify as a technical process since there was no change in the document itself as a technical entity: T208/84 VICOM/Computer-Related Invention [1987] EPOR 74explained.

9. It would make no difference if the control of the computer were effected by hardware such as specifically designed logical means.

PER CURIAM :

1. A claim directed to an activity excluded from patentability but at the same time containing technical features such as a computer controlled by appropriate software would not be unallowable in all circumstances. However the mere setting out of the sequence of steps necessary to perform the activity in terms of functions or functional means to be realised with conventional computer hardware does not lend a technical character to the claimed subject-matter considered as a whole.

2. It cannot have been intended by the Contracting States that express exclusions from patentability could be circumvented simply by the manner in which the invention is expressed in a claim.

Improver Corp v Raymond Industrial Ltd (CA (HK)) Court of Appeal (Hong Kong)

4 September 1990

[1991] F.S.R. 233

INFRINGEMENT, ESSENTIAL INTEGER; WHETHER VARIANT WORKED IN SAME WAY AS CLAIMED FEATURE; WHETHER OBVIOUS THAT IT WOULD DO SO

Abstract: A depilatory device which had an elastometric rod to achieve the same effect as a patented device, which had a helical spring, did not infringe the patent. H.K. The patent in suit was a European patent relating to depilatory devices. A characteristic feature was a helical spring loop. P sued D for infringement in respect of a device which had an elastometric rod to achieve the same effect as the helical spring loop. P argued that this was an obvious mechanical equivalent of the helical spring. D challenged the validity of the patent on the ground of its obviousness. Mayo J. dismissed proceedings for infringement, but upheld the validity of the patent.

Summary: Held, dismissing the appeal, that the patent was valid, but was not infringed. The principles used for determining infringement on the basis of a purposive construction set out in Catnic Components v. Hall & Smith [1981] F.S.R. 60 are consistent with the Protocol on the Interpretation of the European Patent Convention Art. 69. A skilled man would have understood the claim as not intending to include a variant to the helical spring such as D's elastometric rod. The helical spring was an essential integer, and to replace it with a mechanical equivalent doing the same thing did not amount to an infringement (Catnic Components v. Hill & Smith [1981] C.L.Y. 2042 applied).

Merrell Dow Pharmaceuticals Inc v Penn Pharmaceuticals Ltd (HL) House of Lords

26 October 1995

[1996] R.P.C. 76

BYPRODUCT OF EXISTING PATENTED DRUG; NO NOVELTY

M, a pharmaceutical company, appealed against the dismissal of their claim to patent the acid metabolite which was created in the livers of people taking the drug terfenadine, as invalid. In 1972 M had successfully patented the anti- histamine drug terfenadine. The patent expired in 1992 and other companies, including N, began producing terfenadine. M claimed their monopoly in terfenadine continued on the basis of a later patent obtained to protect the acid metabolite, which M had discovered was a byproduct of terfenadine. M brought the action against N and others under the Patents Act 1977 s. 60(2) for infringement of the acid metabolite patent.

Summary: Held, dismissing the appeal, that a chemical composition could be judged to be part of the state of the art only if it was part of a process which had been disclosed as a specification of an invention. The composition of acid metabolite was therefore not new because it was already part of the 1972 patent for terfenadine, even though it was not appreciated at the time the patent was granted. If the specifications of the patent were followed then the production of acid metabolite was inevitable and therefore it was not novel, which was the main precondition for the grant of a patent.

Merrill Lynch Inc's Application (CA) Court of Appeal

21 April 1989

[1989] R.P.C. 561

PATENTS; DATA PROCESSING SYSTEM; WHETHER INVENTION UNPATENTABLE

Abstract: ML appealed against a decision that a data processing based business system for an automated securities trading market was unpatentable. The issue was whether this system was excluded by virtue of the Patents Act 1977 s. 1(2)(c) in that the system involved a computer program.

Summary: Held: Appeal dismissed. If a matter contained a computer program it was not automatically excluded from patentability under s. 1(2). The issue was the extent of the technical contribution the invention made to the prior Art. Thus, following Genentech Inc v Wellcome Foundation Ltd (Unreported) s. 1(2) did not permit the patenting of a conventional computer containing a novel program. ML's system was merely an improvement of existing business methods and did not produce a novel technical result which would usually be patentable.

Pall Corp v Commercial Hydraulics (Bedford) Ltd (No.2) (Pat Ct) Patents Court

25 July 1989

[1990] F.S.R. 329

INFRINGEMENT; WHETHER SAMPLES SENT TO POTENTIAL CUSTOMERS PRIOR USE;

P alleged that D's membranes of nylon infringed P's claim, in respect of a hydropic microporous membrane for filters. D alleged that the claims lacked novelty in view of prior use by P, and of prior publication of a US patent specification. P had sent samples to potential customers for testing, without details of the nature or construction of the membrane. The US specification did not disclose the most important properties of P's patent.

Summary: Held, that (1) use of P's filter by customers was not a sale or supply in the course of trading and the filters had not thereby become part of the state of the art; (2) sending samples for the purposes of confidential experiments was not anticipation; (3) D had failed to show that by carrying out the directions in the US patent, P's membrane would inevitably result.

Milliken Denmark A/S v Walk Off Mats Ltd (Pat Ct) Patents Court

1 December 1995

[1996] F.S.R. 292

INFRINGEMENT; NOVELTY CONSIDERATIONS; PRIOR USE INVALIDATED CLAIM;

This was an action for infringement of a UK patent relating to rubber or plastic backed washable floor mats, used in the doorways of public buildings. The mats required regular washing and spin drying in commercial spin driers that developed large forces sometimes causing the rubber backing to burst. The patent in suit concerned the use of perforations in the backing of mats which opened when subjected to mechanical forces thereby easing the bursting problem. The parties were in dispute over several aspects of construction of claim 1 of the patent in suit. W also attacked the validity of the patent on the grounds of insufficiency and alleged that the matter disclosed in the specification of the patent extended beyond that disclosed in the application as filed by way of addition and deletion and adduced evidence as to prior use. Finally, W claimed that the patent was obvious, relying on the prior use.

Summary: Held, finding the patent infringed but invalid, that (1) the skilled man was entitled to have recourse to the priority document or specification to resolve matters in the published patent specification; (2) in construing the patent, "closed" and "open" were used to mean not permitting or permitting the water flow. The skilled man would not understand the patent as requiring an opening or closing mechanism, or see the perforations as mechanical valves; (3) although claims could be imagined which had no meaning to the skilled man, the concept of "normal use" was unambiguous and clear. The claim did not call for perfection. Excessive leakage of mats occurred in normal use, but did not empty the claim of a reasonable degree of certainty for third parties, General Tire & Rubber Co v Firestone Tyre & Rubber Co Ltd [1971] F.S.R. 417 applied; (4) the patent's validity was not susceptible to attack on the ground of claim ambiguity. The Patent Office could reject claims on that ground, but if a patent were granted for an ambiguous claim, this was not a ground for revocation; (5) on a purposive construction, the fact that W's mats let a little water through was not enough to take them outside the scope of infringement, Henrikson v Tallon Ltd [1965] R.P.C. 434 followed; (6) W's attacks failed on insufficiency, as the skilled man could have performed the invention even with an error in the first claim. It was also clear that the same needle could be used for mats of different thickness; (7) W's attacks on added matter grounds also failed, as these had sought to construe real substance differences from mere language or emphasis changes, Bonzel v Intervention Ltd (No3) [1991] R.P.C. 553 referred to; (8) use of the mats by MD's customers before the priority date invalidated the claim, as use from which knowledge could be gained was not uninformative, Lux Traffic Controls Ltd v Pike Signals Ltd [1993] R.P.C. 107 followed; (9) KT's activities, as rubber backed mat originators, were a prior use which anticipated the patent, and (10) MD's evidence of commercial success did not establish an invention and did not answer questions of anticipation or obviousness

Schering A.G.'s Application In the Appeal Tribunal

9th July, 1971.

(1971) RPC 337

WHETHER METHOD OF CONTRACEPTION PATENTABLE-WHETHER METHOD CONSTITUTED MEDICAL TREATMENT

A patent application claimed a method of contraception comprising the administration of gestagen to a woman in small doses, these doses being sufficient to prevent conception but not such as to suppress ovulation. The hearing officer at the Patent Office refused the application on the ground that processes for the treatment of human beings were incapable of protection under the Patents Act. On appeal by the applicants to the Patents Appeal Tribunal:

Held, allowing the appeal, that, although it seemed that patents for medical treatment in the strict sense of curing or preventing disease had to be excluded under the existing Act, the claims of the application did not appear to fall within that prohibition and should, at least at the application stage, be allowed to proceed.

This was an appeal by the applicants from a decision of the superintending examiner refusing to allow application No. 1714/71 of Schering Aktiengesellschaft to proceed with claims to a method of contraception. The facts of the case appear from the following decision of the Tribunal, sitting in banc.

74 VICOM/Computer-Related Invention T208/84 EPO (Technical Bd App)

15 July 1986

(1987) 2 EPOR 74

PATENTABILITY—METHOD AND APPARATUS FOR DIGITALLY PROCESSING IMAGES

Claim 1 of the application in suit was for 'A method of digitally processing images in the form of a two-dimensional data array' by an operator matrix, ' characterised in that the method includes repeated cycles of sequentially scanning the entire data array with a small generating kernel operator matrix . . . according to conventional error minimisation techniques . . .'. Claim 8 was for 'Apparatus for carrying out the method in Claim 1 . . . characterised in that there are provided feedback means for transferring the output of the mask means to the data input means . . .'. The applicant admitted that it was possible to implement the method and apparatus according to the invention by a suitably programmed conventional computer. The Examining Division rejected the application on the ground that it was for a mathematical method and/or computer program as such.

Held, setting aside the decision of the Examining Division and remitting for further examination as to sufficiency and inventive step:

1. The method of Claim 1 was susceptible of industrial application since it could be used (for example) in investigating the properties of a real or simulated object or in designing an industrial article.
2. A mathematical method as such is an abstract concept prescribing how to operate on numbers, without producing any direct technical result. By contrast, where a mathematical method is used in a technical process, the process is carried out on a physical entity (for example an image stored as an electrical signal) by some technical means which produces a change in that entity.
3. Therefore even if the idea underlying an invention resides in a mathematical method, a claim directed to a technical process in which the method is used does not seek protection for the mathematical method as such.
4. The requirement of EPC Rule 29(1), that claims be drafted in terms of the technical features of the invention, is satisfied if the features mentioned in the claims will be understood by those skilled in the art as referring to technical means for carrying out the functions so specified. Accordingly, if convenient, the use of mathematical expressions is admissible if the skilled person can understand what technical means are necessary from the description and/or general knowledge.
5. A claim directed to a technical process carried out under the control of a computer program cannot be regarded as relating to the computer program as such.
6. A computer of known type set up to operate according to a new program cannot be considered as falling within the state of the art.
7. For similar reasons to (2) to (5) above, the apparatus claims could not be regarded as relating to a computer program as such.
8. Although theoretically such claims should be limited to the apparatus when carrying out the process, this would result in undue limitation of the possibilities for the patentee to assert its rights.
9. Therefore the process and apparatus claims related to patentable subject- matter and satisfied formal requirements.

PER CURIAM:

1. A process carried out under the control of new hardware and/or software is not necessarily capable of industrial application. It would not be so, for example, if it related exclusively to a game.
2. Distinctions between embodiments of the same invention, according to whether they are carried out in hardware or software, would be inappropriate.
3. An invention which is patentable in accordance with conventional criteria should not be excluded from protection simply because modern technical means comprising a computer program are used.
4. It would be illogical to grant protection for a technical process controlled by a suitably programmed computer but not for the computer itself when set up to execute the control.

Windsurfing International Inc. v. Tabur Marine (Great Britain) Ltd. In The Court Of Appeal

31 January 1984

(1985) RPC 59

PATENT INVALID BY REASON OF OBVIOUSNESS AND ANTICIPATION

The patent in suit claimed a wind-propelled vehicle having an unstayed spar connected through a universal joint and a sail attached along one edge to the spar and held taut between a pair of arcuate booms mounted on the spar at one end and joined together at the other (i.e. a Bermuda rig with a wishbone spar). The unstayed sail was used to steer the vehicle and could be jettisoned in case of trouble.

In an action for infringement of the patent, the defendants counterclaimed for its revocation on the grounds that what was claimed lacked novelty over a prior user by C and was obvious in view either of the prior user or of a printed publication D.

D was an article entitled "Sailboarding—Exciting New Water Sport" which described the same basic concept as that of the patent but the sailboard had been fitted with a square-rigged sail.

The cited prior user had taken place some ten years before the date of the patent when C (then a 12-year-old boy) had built a sailboard and used it on an inlet near Hayling Island on summer weekends during two consecutive seasons. The user was open and visible to anyone in the vicinity of the caravan site where the family stayed. C's sailboard differred from what was claimed only in that the sail was held between a pair of booms which were straight when the vehicle was at rest. However the evidence was that in use the booms were sufficiently flexible to assume an arcuate shape.

In the Patents Court, Whitford J. found the claims invalid as anticipated by the prior user and obvious in view of D but he made no finding of obviousness based on the prior user. The plaintiffs then sought to amend by restricting their claims specifically to a surfboard of the Californian type as shown in Figure 1 of the drawings, but the judge concluded that there was no scope for such an amendment and refused to allow it.

The plaintiffs appealed to the Court of Appeal against the findings of anticipation and obviousness and the refusal to allow amendment. The defendants lodged a respondents' notice on the question of obviousness over the prior user.

On the question of obviousness, the defendants argued that it must be assumed from the mere fact of publication that a skilled man would have been familiar with and interested in what was known. The plaintiffs contended that it was necessary to show that a person interested in the field of the invention would have been likely to have come upon what was known and to have appreciated its significance and utility. They argued that a man skilled in the art would have dismissed D as describing a not very practical toy which it would not have been obvious to develop. They argued that C's isolated user could not be relied upon for obviousness, as opposed to anticipation and that it was not an anticipation because the booms were not arcuate at rest.

Held, dismissing the appeal and upholding the defendants' contentions on the respondents' notice:

1. The philosophy behind obviousness must take into account the same concept as anticipation, namely that it would be wrong to prevent a man from doing something which was merely an obvious extension of what he had been doing or what was known in the art before the priority date.
2. It could not matter with regard to section 32(1)(e) that a prior user was non-commercial and of relatively short duration if it was not accidental and was exposed to public view; there was no context for giving the words "having regard to what was used" any different meaning for the purposes of sub-paragraph (f).
3. The question of obviousness was not to be answered by looking with the benefit of hindsight at what was now known and what had been known at the priority date and asking whether the former flowed naturally and obviously from the latter, but by hypothesising what would have been obvious at the priority date to a person skilled in the art who had access to what was known in the art at that date.

4. The question to be answered was whether what had been claimed was obvious, not whether it would have appeared commercially worthwhile to exploit.

5. The man skilled in the art must be assumed to be sufficiently interested to address his mind to the subject and to consider the practical application of the information which he was deemed to have.

6. Answering the question on obviousness required four steps to be taken:

i. identifying the inventive concept embodied in the patent;

ii. imputing to a normally skilled but unimaginative addressee what was common general knowledge in the art at the priority date;

iii. identifying the differences if any between the matter cited and the alleged invention; and

iv. deciding whether those differences, viewed without any knowledge of the alleged invention, constituted steps which would have been obvious to the skilled man or whether they required any degree of invention.

7. The inventive concept of the patent in suit was the free-sail concept.

8. At the priority date anyone familiar with sailing craft would have known as part of his general knowledge the difference between square and Bermuda rigs and the disadvantages of the former for manoeuvrability. He would also have been familiar with a wishbone boom.

9. D was clearly relevant to the field to which the claims of the patent related. This was not a case where the prior document was directed to a different problem. D disclosed the same inventive concept and the only difference of substance was the use of a square rig held by a crossed spar and boom instead of a Bermuda rig held by a wishbone boom.

10. One did not have to assume that the skilled man would treat D as something which had a great commercial future which he must bend every effort to develop and improve, but he must at least be assumed to appreciate and understand the free-sail concept taught by D and to consider in the light of his knowledge and experience how the vehicle described would work on the water.

11. In the light of the evidence, the skilled man would have immediately recognised the disadvantages of the square rig in D, and it would have been immediately obvious to him by applying his own general knowledge that these disadvantages would disappear if the rig were changed to Bermuda. It would also have been obvious to him that this change required the sail to be stretched by means of a wishbone boom.

12. Any skilled adult who applied his mind to C's device would at once have seen it as obvious that the unconventional and primitive split boom ought to be replaced by a wishbone boom.

13. Anticipation by the prior user was established. A skilled man reading the specification would at once identify what was described as "arcuate booms" as a wishbone boom, and C used what was clearly a primitive form of wishbone boom, C's device would quite clearly have constituted an infringement of the patent if it had been manufactured in 1980 instead of 1958.

14. If a patentee wished by amendment to support a claim to monopoly on some alternative basis, it was for him to raise the point in the pleadings and adduce appropriate evidence for the purpose at the trial. It would be difficult to persuade the court, even in a strong case, that discretion could properly be exercised to adjourn the proceedings so that a specialised inventive concept could be raised and investigated as the basis for a claim to monopoly.

15. The plaintiffs' proposed amendment would be incapable of yielding a useful result. Given prior user of the alleged invention in connection with a floating board, its use in connection with a surfboard would have been so entirely obvious as clearly not to constitute a patentable invention.

16. The effect of the proposed amendment would have been not simply to amend the specification but to turn it on its head by elevating to the status of the essential component the one feature of the allegedly inventive combination, which was previously described in terms, which made it entirely clear that it was non-essential. This would go well beyond the scope of mere amendment; it would be putting forward an essentially different concept.

Kirin-Amgen Inc v Transkaryotic Therapies Inc (No.2) (HL) House of Lords

21 October 2004

[2005] 1 All E.R. 667

[2005] R.P.C. 9

(2004) 148 S.J.L.B. 1249

Principle of purposive construction;

Abstract: The appellant (K), a US pharmaceutical company, appealed against a decision ([2002] EWCA Civ 1096, [2003] E.N.P.R. 4) that its patent was not infringed by the product of the second respondent (T), and T cross appealed against a decision that K's patent was not invalid for insufficiency and anticipation. K was the proprietor of a European patent relating to the production of erythropoietin (EPO) by recombinant DNA technology. EPO was a hormone made in the kidney which stimulated the production of red blood cells. T, a US corporation, had also developed a method of making EPO using a process called "gene activation". K claimed that T's EPO infringed the claims of K's patent, and T applied for a declaration of non infringement and revocation of the patent. The essential difference between K's artificial EPO and T's EPO was that the former was made by an exogenous DNA sequence coding for EPO which had been introduced into a host cell, whereas the latter was made by an endogenous DNA sequence coding for EPO in a human cell into which an exogenous upstream control sequence had been inserted. The relevant claims in the patent were for a DNA sequence for use in securing the expression of EPO in a host cell (claim 1), EPO which was the product of the expression of an exogenous DNA sequence (claim 19) and EPO which was the product of the expression in a host cell of a DNA sequence according to claim 1 (claim 26). Only claims 19 and 26 were alleged to have been infringed because T did not make any EPO in the UK, and the alleged infringement was by importation. The judge held ([2002] R.P.C. 2, [2001] C.L.Y. 575) that claim 19 was invalid for insufficiency but that claim 26 was valid and infringed. The Court of Appeal held that both claims were valid but that neither was infringed. K argued that as a matter of construction T's process was within its claim because it involved using a "DNA sequence for use in securing expression of EPO in a host cell". T argued that the patent should be revoked because claim 19 was invalid for insufficiency and claim 26 was invalid for anticipation.

Summary: Held, dismissing the appeal and allowing the cross appeal, that (1) the principle of purposive construction in Catnic Components Ltd v Hill & Smith Ltd (No.1) [1981] F.S.R. 60 was precisely in accordance with the Protocol on the Interpretation of the European Patent Convention 1973 Art. 69, Catnic applied. It was intended to give the patentee the full extent, but not more than the full extent, of the monopoly which a reasonable person skilled in the art, reading the claims in context, would think he was intending to claim. It was important to distinguish between, on the one hand, the guidelines set out in Improver Corp v Remington Consumer Products Ltd [1990] F.S.R. 181 for deciding whether equivalents fell within the scope of the relevant claims and, on the other, the principle of purposive construction established by Catnic; the latter was the bedrock of patent construction, whereas the former were mere guidelines which were more useful in some cases than others, Improver considered. (2) The judge had been right to hold that "host cell" in the context of the specification meant "cell which [was] host to an exogenous DNA sequence encoding for EPO" and on that basis had been entitled to find that claim 1 was to a sequence coding for EPO which was exogenous to the cell in which expression took place and that the person skilled in the art would not regard the endogenous coding sequence which expressed T's EPO as falling within claim 1. Once the judge had construed the claims in that way, he had answered the question of infringement and it was unnecessary and confusing to consider the questions set out in Improver. It followed that T's EPO was not the expression of a DNA sequence within claim 1 and therefore did not infringe claim 26 and by the same process of reasoning that the person skilled in the art would not regard T's EPO as "the product of...expression of an exogenous DNA sequence" within claim 19. A claim might on its proper construction cover products or processes which involved the use of technology unknown at the time the claim was drafted, but in the instant case the man skilled in the art would not have understood the claim as sufficiently general to include T's gene activation method of producing EPO. Therefore T did not infringe any of the claims in K's patent. The judge had been right to find that there was no difference between EPO made according to claim 26 and EPO which had been purified from urine and was already part of the state of the art. The UK should apply the same law as the European Patent Office and the other Member States when deciding what counted as new for the

purposes of the European Patent Convention 1973 and should not accept "product by process" claims as a matter of practice. Claim 26 would have been revoked in opposition proceedings and was therefore declared invalid on the ground of anticipation. The nature of the invention which the specification had to enable was a way of making EPO. The judge had been right to conclude that claim 19 was invalid for insufficiency because the test for distinguishing EPO falling within claim 19 from EPO purified from urine by its molecular weight was in practice incapable of application. The patent was revoked on the grounds that claim 19 was insufficient and that claim 26 was anticipated. (3) (Obiter) before the appeal was heard, the law lords had attended a series of seminars on recombinant DNA technology. Where the technology was complex and undisputed and the parties consented, that was a course which might usefully be adopted in the future in cases of this kind.

Patent Cases U.S.A GOTTSCHALK v. BENSON, 409 U.S. 63 (1972) U.S. Supreme Court

Decided: November 20, 1972

Certiorari to the US Court of Customs and Patent Appeals

Patenting of mathematical calculation/algorithm

Respondents' method for converting numerical information from binary-coded decimal numbers into pure binary numbers, for use in programming conventional general-purpose digital computers is merely a series of mathematical calculations or mental steps and does not constitute a patentable "process" within the meaning of the Patent Act.

EXCERPT FROM THE COURT'S OPINION

"The patent sought is on a method of programming a general-purpose digital computer to convert signals from binary-coded decimal form into pure binary form. A procedure for solving a given type of mathematical problem is known as an "algorithm." The procedures set forth in the present claims are of that kind; that is to say, they are a generalized formulation for programs to solve mathematical problems of converting one form of numerical representation to another. From the generic formulation, programs may be developed as specific applications.

"It is argued that a process patent must either be tied to a particular machine or apparatus or must operate to change articles or materials to a "different state or thing." We do not hold that no process patent could ever qualify if it did not meet the requirements of our prior precedents. It is said that the decision precludes a patent for any program servicing a computer. We do not so hold. It is said that we have before us a program for a digital computer but extend our holding to programs for analog computers. We have, however, made clear from the start that we deal with a program only for digital computers. It is said we freeze process patents to old technologies, leaving no room for the revelations of the new, onrushing technology. Such is not our purpose. What we come down to in a nutshell is the following.

"It is conceded that one may not patent an idea. But in practical effect that would be the result if the formula for converting BCD numerals to pure binary numerals were patented in this case. The mathematical formula involved here has no substantial practical application except in connection with a digital computer, which [409 U.S. 63, 72] means that if the judgment below is affirmed, the patent would wholly pre-empt the mathematical formula and in practical effect would be a patent on the algorithm itself.

"If these programs are to be patentable, considerable problems are raised which only committees of Congress can manage, for broad powers of investigation are needed, including hearings which canvass the wide variety of views which those operating in this field entertain. The technological problems tendered in the many briefs before us indicate to us that considered action by the Congress is needed."

PARKER v. FLOOK, 437 U.S. 584 (1978)
U.S. Supreme Court

Decided June 22, 1978

CERTIORARI TO THE COURT OF CUSTOMS AND PATENT APPEALS PATENTING OF MATHEMATICAL CALCULATION/ALGORITHM

Respondent's method for updating alarm limits during catalytic conversion processes, in which the only novel feature is a mathematical formula, held not patentable under 101 of the Patent Act. The identification of a limited category of useful, though conventional, post-solution applications of such a formula does not make the method eligible for patent protection, since assuming the formula to be within prior art, as it must be, O'Reilly v. Morse, 15 How. 62, respondent's application contains no patentable invention. The chemical processes involved in catalytic conversion are well known, as are the monitoring of process variables, the use of alarm limits to trigger alarms, the notion that alarm limit values must be recomputed and readjusted, and the use of computers for "automatic process monitoring." Pp. 588-596.

OPINION OF THE COURT

Respondent applied for a patent on a "Method for Updating Alarm Limits." The only novel feature of the method is a mathematical formula. In Gottschalk v. Benson, 409 U.S. 63, we held that the discovery of a novel and useful mathematical formula may not be patented. The question in this case is whether the identification of a limited category of useful, though conventional, post-solution applications of such a formula makes respondent's method eligible for patent protection.

I. An "alarm limit" is a number. During catalytic conversion processes, operating conditions such as temperature, pressure, and flow rates are constantly monitored. When any of these "process variables" exceeds a predetermined "alarm limit," an alarm may signal the presence of an abnormal condition indicating either inefficiency or perhaps danger. Fixed alarm limits may be appropriate for a steady operation, but during transient operating situations, such as start-up, it may be necessary to "update" the alarm limits periodically.

Respondent's patent application describes a method of updating alarm limits. In essence, the method consists of three steps: an initial step which merely measures the present value of the process variable (e. g., the temperature); an intermediate step which uses an algorithm1 to calculate an updated alarm-limit value; and a final step in which the actual alarm limit is adjusted to the updated value.2 The only difference [437 U.S. 584, 586] between the conventional methods of changing alarm limits and that described in respondent's application rests in the second step - the mathematical algorithm or formula. Using the formula, an operator can calculate an updated alarm limit once he knows the original alarm base, the appropriate margin of safety, the time interval that should elapse between each updating, the current temperature (or other process variable), and the appropriate weighting factor to be used to average the original alarm base and the current temperature.

The patent application does not purport to explain how to select the appropriate margin of safety, the weighting factor, or any of the other variables. Nor does it purport to contain any disclosure relating to the chemical processes at work, the monitoring of process variables, or the means of setting off an alarm or adjusting an alarm system. All that it provides is a formula for computing an updated alarm limit. Although the computations can be made by pencil and paper calculations, the abstract of disclosure makes it clear that the formula is primarily useful for computerized calculations producing automatic adjustments in alarm settings.3

The patent claims cover any use of respondent's formula for updating the value of an alarm limit on any process variable involved in a process comprising the catalytic chemical conversion of hydrocarbons. Since there are numerous processes of that kind in the petrochemical and oil-refining industries,4 the claims cover a broad range of potential uses of the method. They do not, however, cover every conceivable application of the formula. [437 U.S. 584, 587]

II. The patent examiner rejected the application. He found that the mathematical formula constituted the only difference between respondent's claims and the prior art and therefore a patent on this method "would in practical effect be a patent on the formula or mathematics itself."5 The examiner concluded that the claims did not describe a discovery that was eligible for patent protection. The Board of Appeals of the Patent and Trademark Office sustained the examiner's rejection. The Board also concluded that the "point of novelty in [respondent's] claimed method"6 lay in the formula or algorithm described in the claims, a subject matter that was unpatentable under Benson, supra.

The Court of Customs and Patent Appeals reversed. In re Flook, 559 F.2d 21. It read Benson as applying only to claims that entirely pre-empt a mathematical formula or algorithm, and noted that respondent was only claiming on the use of his method to update alarm limits in a process comprising the catalytic chemical conversion of hydrocarbons. The court reasoned that since the mere solution of the algorithm would not constitute infringement of the claims, a patent on the method would not pre-empt the formula.

The Acting Commissioner of Patents and Trademarks filed a petition for a writ of certiorari, urging that the decision of the Court of Customs and Patent Appeals will have a debilitating effect on the rapidly expanding computer "software" industry,7 and will require him to process thousands of additional [437 U.S. 584, 588] patent applications. Because of the importance of the question, we granted certiorari, 434 U.S. 1033.

III . This case turns entirely on the proper construction of 101 of the Patent Act, which describes the subject matter that is eligible for patent protection.8 It does not involve the familiar issues of novelty and obviousness that routinely arise under 102 and 103 when the validity of a patent is challenged. For the purpose of our analysis, we assume that respondent's formula is novel and useful and that he discovered it. We also assume, since respondent does not challenge the examiner's finding, that the formula is the only novel feature of respondent's method. The question is whether the discovery of this feature makes an otherwise conventional method eligible for patent protection.

The plain language of 101 does not answer the question. It is true, as respondent argues, that his method is a "process" in the ordinary sense of the word.9 But that was also true of the algorithm, which described a method for converting binary-coded decimal numerals into pure binary numerals, [437 U.S. 584, 589] that was involved in Gottschalk v. Benson. The holding that the discovery of that method could not be patented as a "process" forecloses a purely literal reading of 101.10 Reasoning that an algorithm, or mathematical formula, is like a law of nature. Benson applied the established rule that a law of nature cannot be the subject of a patent. Quoting from earlier cases, we said:

"`A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right.' Le Roy v. Tatham, 14 How. 156, 175. Phenomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work." 409 U.S., at 67.

The line between a patentable "process" and an unpatentable "principle" is not always clear. Both are "conception[s] of the mind, seen only by [their] effects when being executed or performed." Tilghman v. Proctor, 102 U.S. 707, 728. In Benson we concluded that the process application in fact sought to patent an idea, noting that

"[t]he mathematical formula involved here has no substantial practical application except in connection with a digital computer, which means that if the judgment below is affirmed, the patent would wholly pre-empt the mathematical formula and in practical effect would be a patent on the algorithm itself." 409 U.S., at 71-72.

Respondent correctly points out that this language does not apply to his claims. He does not seek to "wholly preempt the mathematical formula," since there are uses of his [437 U.S. 584, 590] formula outside the petrochemical and oil-refining industries that remain in the public domain. And he argues that the presence of specific "post-solution" activity - the adjustment of the alarm limit to the figure computed according to the formula - distinguishes this case from Benson and makes his process patentable. We cannot agree.

The notion that post-solution activity, no matter how conventional or obvious in itself, can transform an unpatentable principle into a patentable process exalts form over substance. A competent draftsman could attach some form of post-solution activity to almost any mathematical formula; the Pythagorean theorem would not have been patentable, or partially patentable, because a patent application contained a final step indicating that the formula, when solved, could be usefully applied to existing surveying techniques.11 The concept of patentable subject matter under 101 is not "like a nose of wax which may be turned and twisted in any direction . . . ." White v. Dunbar, 119 U.S. 47, 51.

Yet it is equally clear that a process is not unpatentable simply because it contains a law of nature or a mathematical algorithm. See Eibel Process Co. v. Minnesota & Ontario Paper Co., 261 U.S. 45; Tilghman v. Proctor, supra.12 For [437 U.S. 584, 591] instance, in Mackay Radio & Telegraph Co. v. Radio Corp. of America, 306 U.S. 86, the applicant sought a patent on a directional antenna system in which the wire arrangement was determined by the logical application of a mathematical formula. Putting the question of patentability to one side as a preface to his analysis of the infringement issue, Mr. Justice Stone, writing for the Court, explained:

"While a scientific truth, or the mathematical expression of it, is not patentable invention, a novel and useful structure created with the aid of knowledge of scientific truth may be." Id., at 94.

Funk Bros. Seed Co. v. Kalo Co., 333 U.S. 127, 130, expresses a similar approach:

"He who discovers a hitherto unknown phenomenon of nature has no claim to a monopoly of it which the law recognizes. If there is to be invention from such a discovery, it must come from the application of the law of nature to a new and useful end."

Mackay Radio and Funk Bros. point to the proper analysis for this case: The process itself, not merely the mathematical algorithm, must be new and useful. Indeed, the novelty of the mathematical algorithm is not a determining factor at all. Whether the algorithm was in fact known or unknown at the time of the claimed invention, as one of the "basic tools of scientific and technological work," see Gottschalk v. Benson, [437 U.S. 584, 592] 409 U.S., at 67, it is treated as though it were a familiar part of the prior art.

This is also the teaching of our landmark decision in O'Reilly v. Morse, 15 How. 62. In that case the Court rejected Samuel Morse's broad claim covering any use of electromagnetism for printing intelligible signs, characters, or letters at a distance. Id., at 112-121. In reviewing earlier cases applying the rule that a scientific principle cannot be patented, the Court placed particular emphasis on the English case of Neilson v. Harford, Web. Pat. Cases 295, 371 (1844), which involved the circulation of heated air in a furnace system to increase its efficiency. The English court rejected the argument that the patent merely covered the principle that furnace temperature could be increased by injecting hot air, instead of cold into the furnace. That court's explanation of its decision was relied on by this Court in Morse:

"`It is very difficult to distinguish it [the Neilson patent] from the specification of a patent for a principle, and this at first created in the minds of the court much difficulty; but after full consideration, we think that the plaintiff does not merely claim a principle, but a machine, embodying a principle, and a very valuable one. We think the case must be considered as if the principle being well known, the plaintiff had first invented a mode of applying it . . . .'" 15 How., at 115 (emphasis added).13

We think this case must also be considered as if the principle or mathematical formula were well known.

Respondent argues that this approach improperly imports into 101 the considerations of "inventiveness" which are the proper concerns of 102 and 103.14 This argument is based on two fundamental misconceptions. [437 U.S. 584, 593]

First, respondent incorrectly assumes that if a process application implements a principle in some specific fashion, it automatically falls within the patentable subject matter of 101 and the substantive patentability of the particular process can then be determined by the conditions of 102 and 103. This assumption is based on respondent's narrow reading of Benson, and is as untenable in the context of 101 as it is in the context of that case. It would make the determination of patentable subject matter depend simply on the draftsman's art and would ill serve the principles underlying the prohibition against patents for "ideas" or phenomena of nature. The rule that the discovery of a law of nature cannot be patented rests, not on the notion that natural phenomena are not processes, but rather on the more fundamental understanding that they are not the kind of "discoveries" that the statute was enacted to protect.15 The obligation to determine what type of discovery is sought to be patented must precede the determination of whether that discovery is, in fact, new or obvious. Second, respondent assumes that the fatal objection to his application is the fact that one of its components - the mathematical [437 U.S. 584, 594] formula - consists of unpatentable subject matter. In countering this supposed objection, respondent relies on opinions by the Court of Customs and Patent Appeals which reject the notion "that a claim may be dissected, the claim components searched in the prior art, and, if the only component found novel is outside the statutory classes of invention, the claim may be rejected under 35 U.S.C. 101." In re Chatfield, 545 F.2d 152, 158 (CCPA 1976).16 Our approach to respondent's application is, however, not at all inconsistent with the view that a patent claim must be considered as a whole. Respondent's process is unpatentable under 101, not because it contains a mathematical algorithm as one component, but because once that algorithm is assumed to be within the prior art, the application, considered as a whole, contains no patentable invention. Even though a phenomenon of nature or mathematical formula may be well known, an inventive application of the principle may be patented. Conversely, the discovery of such a phenomenon cannot support a patent unless there is some other inventive concept in its application.

Here it is absolutely clear that respondent's application contains no claim of patentable invention. The chemical processes involved in catalytic conversion of hydrocarbons are well known, as are the practice of monitoring the chemical process variables, the use of alarm limits to trigger alarms, the notion that alarm limit values must be recomputed and readjusted, and the use of computers for "automatic monitoring-alarming."17 Respondent's application simply provides a new and presumably better method for calculating alarm limit [437 U.S. 584, 595] values. If we assume that that method was also known, as we must under the reasoning in Morse, then respondent's claim is, in effect, comparable to a claim that the formula 2(pi)r can be usefully applied in determining the circumference of a wheel.18 As the Court of Customs and Patent Appeals has explained, "if a claim is directed essentially to a method of calculating, using a mathematical formula, even if the solution is for a specific purpose, the claimed method is nonstatutory." In re Richman, 563 F.2d 1026, 1030 (1977).

To a large extent our conclusion is based on reasoning derived from opinions written before the modern business of developing programs for computers was conceived. The youth of the industry may explain the complete absence of precedent supporting patentability. Neither the dearth of precedent, nor this decision, should therefore be interpreted as reflecting a judgment that patent protection of certain novel and useful computer programs will not promote the progress of science and the useful arts, or that such protection is undesirable as a matter of policy. Difficult questions of policy concerning the kinds of programs that may be appropriate for patent protection and the form and duration of such protection can be answered by Congress on the basis of current empirical data not equally available to this tribunal.19 [437 U.S. 584, 596]

It is our duty to construe the patent statutes as they now read, in light of our prior precedents, and we must proceed cautiously when we are asked to extend patent rights into areas wholly unforeseen by Congress. As MR. JUSTICE WHITE explained in writing for the Court in Deepsouth Packing Co. v. Laitram Corp., 406 U.S. 518, 531:

"[W]e should not expand patent rights by overruling or modifying our prior cases construing the patent statutes, unless the argument for expansion of privilege is based on more than mere inference from ambiguous statutory language. We would require a clear and certain signal from Congress before approving the position of a litigant who, as respondent here, argues that the beachhead of privilege is wider, and the area of public use narrower, than courts had previously thought. No such signal legitimizes respondent's position in this litigation."

The judgment of the Court of Customs and Patent Appeals is Reversed.

Diamond v. Diehr 450 U. S. 175 (1981)
U.S. Supreme Court

Decided March 3, 1981

CERTIORARI TO THE COURT OF CUSTOMS AND PATENT APPEALS

Patenting of mathematical calculation/algorithm

Respondents filed a patent application claiming invention for a process for molding raw, uncured synthetic rubber into cured precision products. While it was possible, by using well-known time, temperature, and cure relationships, to calculate by means of an established mathematical equation when to open the molding press and remove the cured product, according to respondents the industry had not been able to measure precisely the temperature inside the press, thus making it difficult to make the necessary computations to determine the proper cure time. Respondents characterized their contribution to the art to reside in the process of constantly measuring the temperature inside the mold and feeding the temperature measurements into a computer that repeatedly recalculates the cure time by use of the mathematical equation and then signals a device to open the press at the proper time. The patent examiner rejected respondents' claims on the ground that they were drawn to nonstatutory subject matter under 35 U.S.C. § 101, which provides for the issuance of patents to "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof …." The Patent and Trademark Office Board of Appeals agreed, but the Court of Customs and Patent Appeals reversed.

Held: Respondents' claims recited subject matter that was eligible for patent protection under § 101.

(a) For purposes of § 101, a "process" is "an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing. If new and useful, it is just as patentable as is a piece of machinery…. The machinery pointed out as suitable to perform the process may or may not be new or patentable." Cochrane v. Deener , 94 U.S. 780, 788. Industrial processes such as respondents' claims for transforming raw, uncured synthetic rubber into a different state or thing are the types which have historically been eligible to receive patent-law protection.

(b) While a mathematical formula, like a law of nature, cannot be the subject of a patent, cf. Gottschalk v. Benson , 409 U.S. 63; Parker v. Flook , 437 U.S. 584, respondents do not seek to patent a mathematical formula, but instead seek protection for a process of curing synthetic rubber. Although their process employs a well-known mathematical equation, they do not seek to pre-empt the use of that equation, except in conjunction with all of the other steps in their claimed process. A claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula, computer program, or digital computer. Respondents' claims must be considered as a whole, it being inappropriate to dissect the claims into old and new elements and then to ignore the presence of the old elements in the analysis. The questions of whether a particular invention meets the "novelty" requirements of 35 U.S.C. § 102 or the "nonobviousness" requirements of §103 do not affect the determination of whether the invention falls into a category of subject matter that is eligible for patent protection under § 101.

(c) When a claim containing a mathematical formula implements or applies the formula in a structure or process which, when considered as a whole, is performing a function which the patent laws were designed to protect (e. g., transforming or reducing an article to a different state or thing), then the claim satisfies 101's requirements.

Arrhythmia Research Technology Inc. v. Corazonix Corp.

958 F.2d 1053 U.S. Court of Appeals Federal Circuit

Decided on March 12, 1992

Appeal against the United States District Court for the Northern District of Texas

Patenting of mathematical calculation/algorithm

Arrhythmia Research Technology, Inc. appeals the grant of summary judgment by the United States District Court for the Northern District of Texas1 declaring United States Patent No. 4,422,459 to Michael B. Simson (the '459 or Simson patent) invalid for failure to claim statutory subject matter under 35 U.S.C. Section 101. The court did not decide the question of infringement.

We conclude that the claimed subject matter is statutory in terms of section 101. The judgment of invalidity on this ground is reversed.

The invention claimed in the '459 patent is directed to the analysis of electrocardiographic signals in order to determine certain characteristics of the heart function. In the hours immediately after a heart attack (myocardial infarction) the victim is particularly vulnerable to an acute type of heart arrhythmia known as ventricular tachycardia. Ventricular tachycardia leads quickly to ventricular fibrillation, in which the heart ceases effectively to pump blood through the body. Arrhythmia Research states that 15-25% of heart attack victims are at high risk for ventricular tachycardia. It can be treated or prevented with certain drugs, but these drugs have undesirable and sometimes dangerous side effects. Dr. Simson, a cardiologist, sought a solution to the problem of determining which heart attack victims are at high risk for ventricular tachycardia, so that these persons can be carefully monitored and appropriately treated.

Heart activity is monitored by means of an electrocardiograph device, whereby electrodes attached to the patient's body detect the heart's electrical signals in accordance with the various phases of heart activity. The signals can be displayed in wave form on a monitor and/or recorded on a chart. It was known that in patients subject to ventricular tachycardia certain anomalous waves having very low amplitude and high frequency, known as "late potentials," appear toward the end of the QRS2 segment of the electrocardiographic signal, that is, late in the ventricular contraction cycle. Dr. Simson's method of detecting and measuring these late potentials in the QRS complex, and associated apparatus, are the subject of the '459 patent. The district court held that the method and apparatus claims of the Simson patent are directed to a mathematical algorithm, and thus do not define statutory subject matter.

Arrhythmia Research states that the district court erred in law, and that the combination of physical, mechanical, and electrical steps that are described and claimed in the '459 patent constitutes statutory subject matter. Arrhythmia Research stresses that the claims are directed to a process and apparatus for detecting and analyzing a specific heart activity signal, and do not preempt the mathematical algorithms used in any of the procedures. Arrhythmia Research states that the patentability of such claims is now well established by law, precedent, and practice.

Corazonix states that the claims define no more than a mathematical algorithm that calculates a number. Corazonix states that in Simson's process and apparatus claims mathematical algorithms are merely presented and solved, and that Simson's designation of a field of use and post-solution activity are not essential to the claims and thus do not cure this defect. Thus, Corazonix states that the claims are not directed to statutory subject matter, and that the district court's judgment was correct.

COURT'S ANALYSIS

Simson's process is claimed as a "method for analyzing electrocardiograph signals to determine the presence or absence of a predetermined level of high-frequency energy in the late QRS signal". This claim limitation is not ignored in determining whether the subject matter as a whole is statutory, for all of the claim steps are in implementation of this method. The electrocardiograph signals are first transformed from analog form, in which they are obtained, to the corresponding digital signal. These input signals are not abstractions; they are related to the patient's heart function. The anterior portion of the QRS signal is then processed, as the next step, by the procedure known as reverse time order filtration. The digital filter design selected by Dr. Simson for this purpose, known as the Butterworth filter, is one of several known procedures for frequency filtering of digital waveforms. The filtered signal is further analyzed to determine its average magnitude, as described in the specification, by the root mean square technique. Comparison of the resulting output to a predetermined level determines whether late potentials reside in the anterior portion of the QRS segment, thus indicating whether the patient is at high risk for ventricular tachycardia. The resultant output is not an abstract number, but is a signal related to the patient's heart activity.

These claimed steps of "converting", "applying", "determining", and "comparing" are physical process steps that transform one physical, electrical signal into another. The view that "there is nothing necessarily physical about 'signals' " is incorrect. The Simson claims are analogous to those upheld in Diehr, wherein the Court remarked that the applicants "do not seek to patent a mathematical formula . . . they seek only to foreclose from others the use of that equation in conjunction with all of the other steps in their claimed process". 450 U.S. at 187, 209 <958 F.2d 1060> USPQ at 8. Simson's claimed method is similarly limited. The process claims comprise statutory subject matter. Corazonix argues that the final output of the claimed apparatus (and process) is simply a number, and that Benson and Flooksupport the position that when the end product is a number, the claim is nonstatutory and can not be saved by claim limitations of the use to which this number is put. However, the number obtained is not a mathematical abstraction; it is a measure in microvolts of a specified heart activity, an indicator of the risk of ventricular tachycardia. That the product is numerical is not a criterion of whether the claim is directed to statutory subject matter.

The Simson apparatus claims satisfy the criteria for statutory subject matter. They are directed to a specific apparatus of practical utility and specified application, and meet the requirements of 35 U.S.C. Section 101. The judgment of invalidity on the ground that the claimed method and apparatus do not define statutory subject matter is reversed

State Street Bank & Trust Co. v. Signature Financial Group, 149 F.3d 1368. US Court of Appeals for the Federal Circuit

Decided on 23rd July 1998

Appeal against U.S. District Court for the District of Massachusetts

Patenting of mathematical calculation/algorithm/ business methods

Signature is the assignee of U.S. Patent No. 5,193,056 (the '056 patent), entitled "Data Processing System for Hub and Spoke Financial Services Configuration." The '056 patent is generally directed to a data processing system for implementing an investment structure which was developed for use in Signature's business as an administrator and accounting agent for mutual funds. The data processing system facilitates a structure wherein mutual funds pool their assets into an investment portfolio organized as a partnership, providing the administrator of the mutual fund with the combination of economies of scale in administering investments and the tax advantages of a partnership. The '056 patent application initially contained six machine claims and six method claims. During prosecution the examiner contemplated a § 101 rejection for failure to claim statutory subject matter. However, upon cancellation of the six method claims, the examiner allowed the remaining six machine claims.

State Street brought a declaratory judgment action asserting invalidity, unenforceability, and noninfringement, and then filed a motion for partial summary judgment of patent invalidity for failure to claim subject matter encompassed by § 101. The motion was granted because the district court concluded that the claimed subject matter fell into one of two alternative judicially-created exceptions to statutory subject matter, the "mathematical algorithm" exception or the "business method" exception.

State of the Law Before State Steet Bank

The statutory limit on patentable inventions is defined by 35 U.S.C. § 101 (1994) which recites "any process, machine, manufacture or composition of matter" as patentable subject matter. Unpatentable subject matters identified by the Supreme Court include "laws of nature, natural phenomena and abstract ideas." Diamond v. Diehr, 450 U.S. 175, 185 (1981). The Court has generally construed mathematical algorithms as abstract ideas, and thus as unpatentable subject matter under § 101. See Gottschalk v. Benson, 409 U.S. 63 (1972); Parker v. Flook, 437 U.S. 584 (1978). In Diamond v. Diehr, the Court relaxed this algorithm unpatentability doctrine by concluding that the incorporation of a computer algorithm to improve an industrial process did not automatically make the process unpatentable subject matter. The Court did not overrule the Benson-Flook algorithm unpatentability doctrine ("A mathematical formula as such is not accorded the protection of our patent laws." Id. at 191), but nevertheless stated that "an application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection." Id. at 187.

Through three cases involving mathematical algorithms, the Court of Customs and Patent Appeals (the predecessor to the present Court of Appeals for the Federal Circuit) articulated a test to determine patentability intended accommodate the implication of the Supreme Court rulings regarding the algorithm unpatentability doctrine. See In re Freeman, 573 F.2d 1237 (C.C.P.A. 1978); In re Walter, 618 F.2d 758 (C.C.P.A. 1980); In re Abele, 684 F.2d 902 (C.C.P.A. 1982). According to the Freeman-Walter-Abele test: "It is first determined whether a mathematical algorithm is recited directly or indirectly in the claim. If so, it is next determined whether the claimed invention as a whole is no more than the algorithm itself; that is, whether the claim is directed to a mathematical algorithm that is not applied to or limited by physical elements or process steps." Arrhythmia Research Technology, Inc. v. Corazonix Corp., 958 F.2d 1053, 1058 (Fed. Cir. 1992) (emphasis added). The Court of Appeals for the Federal Circuit in In re Alappat, 33 F.3d 1526 (Fed. Cir. 1994) substantially relaxed the physicality requirement of the Freeman-Walter-Abele test to include a programmed general-purpose computer as a patentable subject matter. "This is not a disembodied mathematical concept which may be characterized as an 'abstract idea,' but rather a specific machine to produce a useful, concrete, and tangible result." Id. at 1544 (emphasis added). On the other hand, the court in In re Warmerdam, 33 F.3d 1354 (Fed. Cir. 1994) was stricter and required claims involving computer data manipulation and data structure to be "more than the manipulation of abstract ideas," id. at 1360, in order to be patentable under § 101.

The earliest known case on the unpatentability of business methods, often cited as establishing the so-called "business method exception" doctrine, is Hotel Security Checking Co. v. Lorraine Co., 160 F. 467 (2d Cir. 1908). There, the court held that systems of transacting business, such as a bookkeeping system to prevent embezzlement by waiters, were unpatentable. While many subsequent cases decided by the Federal Circuit have made references to the business method exceptions, they were all ultimately decided on other grounds. See, e.g., In re Howards, 394 F.2d 869, 872 (C.C.P.A. 1968) ("Our affirmance of this ground of rejection [based on lack of novelty] makes it unnecessary to consider the issue of whether a method of doing business is inherently unpatentable"); In re Schrader, 22 F.3d 290, 296 & n.14, 297-98 (Fed. Cir. 1994) (rejecting patentability on the basis of the mathematical algorithm exception, while making reference to the business method exception).

EFFECT OF STATE STREET BANK ON CURRENT LAW

State Street has a significant effect on the law of eligible subject matter. First, State Street makes the utility requirement more lenient. Second, State Street puts an end to the business method exception.

The utility requirement maintains that certain types of mathematical subject matter or algorithms, standing alone, represent nothing more than abstract ideas. Once this subject matter is reduced to some type of practical application, it becomes patentable.

The standard for this practical application has been, and remains, the production of "a useful, concrete and tangible result." Alappat, 33 F.3d at 1544. The Federal Circuit in State Street holds that the production of "a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades, " State Street, 149 F.3d at 1373, is indeed the production of a useful, concrete and tangible result.

The Federal Circuit held that once an invention passes the utility requirement, that invention becomes eligible under § 101. However, "Section 101 specifies that statutory subject matter must also satisfy the other 'conditions and requirements' of Title 35, including novelty, nonobviousness, and adequacy of disclosure and notice." Id. at 1372. In relying on utility, the Federal Circuit redefined the scope of eligible subject matter and hence broadened the meaning of the terms specified in § 101.

The Federal Circuit also held that business methods are no longer an exception to statutory subject matter. Instead, business methods are subject to the same legal requirements for patentability as applied to any other process or method.

DIAMOND, COMMISSIONER OF PATENTS AND TRADEMARKS v. CHAKRABARTY

447 U.S. 303 SUPREME COURT OF THE UNITED STATES

Decided June 16, 1980

CERTIORARI TO THE UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS.

CASE SUMMARY

Petitioner, Commissioner of Patents and Trademarks, appealed the judgment from the United State Court of Customs and Patent Appeals, which allowed respondent's patent claims for a genetically engineered micro-organism that was capable of breaking down crude oil. Respondent, patentee microbiologist, filed patent claims for human-made, genetically engineered bacterium that was capable of breaking down multiple components of crude oil. The Supreme Court affirmed the judgment of the court of customs and patent appeals that allowed the claims. The Supreme Court rejected the argument of the patent office board of appeals that 35 U.S.C.S. § 101 was not intended to cover living things such as laboratory created micro-organisms. The Supreme Court held that respondent's micro-organism constituted a "manufacture" or a "composition of matter" within the meaning of 35 U.S.C.S. § 101 and thus qualified as patentable subject matter. The Supreme Court found that respondent had produced a new bacterium with markedly different characteristics from any found in nature and which had the potential for significant utility. The Supreme Court held that the language of 35 U.S.C.S. § 101 embraced respondent's invention.

OUTCOME

The Supreme Court affirmed the judgment of the court of customs and patent appeals that allowed respondent's patent claims. The Supreme Court held that the language of the patent statute covered respondent's invention of a living, genetically engineered micro-organism.

Title 35 U. S. C. § 101 provides for the issuance of a patent to a person who invents or discovers "any" new and useful "manufacture" or "composition of matter." Respondent filed a patent application relating to his invention of a human-made, genetically engineered bacterium capable of breaking down crude oil, a property which is possessed by no naturally occurring bacteria. A patent examiner's rejection of the patent application's claims for the new bacteria was affirmed by the Patent Office Board of Appeals on the ground that living things are not patentable subject matter under § 101. The Court of Customs and Patent Appeals reversed, concluding that the fact that micro-organisms are alive is without legal significance for purposes of the patent law.

Held: A live, human-made micro-organism is patentable [***2] subject matter under § 101. Respondent's micro-organism constitutes a "manufacture" or "composition of matter" within that statute. Pp. 308-318.

(a) In choosing such expansive terms as "manufacture" and "composition of matter," modified by the comprehensive "any," Congress contemplated that the patent laws should be given wide scope, and the relevant legislative history also supports a broad construction. While laws of nature, physical phenomena, and abstract ideas are not patentable, respondent's claim is not to a hitherto unknown natural phenomenon, but to a nonnaturally occurring manufacture or composition of matter — a product of human ingenuity "having a distinctive name, character [and] use." Hartranft v. Wiegmann, 121 U.S. 609, 615. Funk Brothers Seed Co. v. Kalo Inoculant Co., 333 U.S. 127, distinguished. Pp. 308-310.

(b) The passage of the 1930 Plant Patent Act, which afforded patent protection to certain asexually reproduced plants, and the 1970 Plant Variety Protection Act, which authorized protection for certain sexually reproduced plants but excluded bacteria from its protection, does not evidence congressional understanding [***3] that the terms "manufacture" or "composition of matter" in § 101 do not include living things. Pp. 310-314.

(c) Nor does the fact that genetic technology was unforeseen when Congress enacted § 101 require the conclusion that micro-organisms cannot qualify as patentable subject matter until Congress expressly authorizes such protection. The unambiguous language of § 101 fairly embraces respondent's invention. Arguments against patentability under § 101, based on potential hazards that may be generated by genetic research, should be addressed to the Congress and the Executive, not to the Judiciary. Pp. 314-318.

MR. CHIEF JUSTICE BURGER delivered the opinion of the Court.

We granted certiorari to determine whether a live, human-made micro-organism is patentable subject matter under 35 U. S. C. § 101.

In 1972, respondent Chakrabarty, a microbiologist, filed a patent application, assigned to the General Electric Co. The application asserted 36 claims related to Chakrabarty's invention of "a bacterium from the genus Pseudomonas containing therein at least two stable energy-generating plasmids, each of said plasmids providing a separate hydrocarbon degradative pathway." n1 This human-made, genetically [**2206] engineered bacterium is capable of breaking down multiple components of crude oil. Because of this property, which is possessed by no naturally occurring bacteria, Chakrabarty's invention is believed to have significant value for the treatment of oil spills.

Chakrabarty's patent claims were of three types: first, process claims for the method of producing the bacteria; [*306] second, claims for an inoculum comprised of a carrier material floating on water, such as straw, and the new bacteria; and third, claims to the bacteria themselves. The patent examiner allowed the claims falling into the first two categories, but rejected claims for the bacteria. His decision rested on two grounds: (1) that micro-organisms are "products of nature," and (2) that as living things they are not patentable subject matter under 35 U. S. C. § 101. [***6]

Chakrabarty appealed the rejection of these claims to the Patent Office Board of Appeals, and the Board affirmed the examiner on the second ground. n3 Relying on the legislative history of the 1930 Plant Patent Act, in which Congress extended patent protection to certain asexually reproduced plants, the Board concluded that § 101 was not intended to cover living things such as these laboratory created micro-organisms.

The Court of Customs and Patent Appeals, by a divided vote, reversed on the authority of its prior decision in In re Bergy, 563 F.2d 1031, 1038 (1977), which held that "the fact that microorganisms . . . are alive . . . [is] without legal significance" for purposes of the patent law. n4 Subsequently, we granted the Acting Commissioner of Patents and Trademarks' petition for certiorari [***7] in Bergy, vacated the judgment, and remanded the case "for further consideration in light of Parker v. Flook, 437 U.S. 584 (1978)." 438 U.S. 902 (1978). The Court of Customs and Patent Appeals then vacated its judgment in Chakrabarty and consolidated the case with Bergy for reconsideration. After re-examining both cases in the light of our holding in Flook, that court, with one dissent, reaffirmed its earlier judgments. 596 F.2d 952 (1979).

[*307] The Commissioner of Patents and Trademarks again sought certiorari, and we granted the writ as to both Bergy and Chakrabarty. 444 U.S. 924 (1979). Since then, Bergy has been dismissed as moot, 444 U.S. 1028 (1980), leaving only Chakrabarty for decision. [***8] The Constitution grants Congress broad power to legislate to "promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." Art. I, § 8, cl. 8. The patent laws promote this progress by offering inventors exclusive rights for a limited period as an incentive for their inventiveness [**2207] and research efforts. Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 480-481 (1974); Universal Oil Co. v. Globe Co., 322 U.S. 471, 484 (1944). The authority of Congress is exercised in the hope that "[the] productive effort thereby fostered will have a positive effect on society through the introduction of new products and processes of manufacture into the economy, and the emanations by way of increased employment and better lives for our citizens." Kewanee, supra, at 480.

The question before us in this case is a narrow one of statutory interpretation requiring us to construe [***9] 35 U. S. C. § 101, which provides: "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." Specifically, we must determine whether respondent's micro-organism constitutes a "manufacture" or "composition of matter" within the meaning of the statute. n5 In cases of statutory construction we begin, of course, with the language [***10] of the statute. Southeastern Community College v. Davis, 442 U.S. 397, 405 (1979). And "unless otherwise defined, words will be interpreted as taking their ordinary, contemporary, common meaning." Perrin v. United States, 444 U.S. 37, 42 (1979). We have also cautioned that courts "should not read into the patent laws limitations and conditions which the legislature has not expressed." United States v. Dubilier Condenser Corp., 289 U.S. 178, 199 (1933).

Guided by these canons of construction, this Court has read the term "manufacture" in § 101 in accordance with its dictionary definition to mean "the production of articles for use from raw or prepared materials by giving to these materials new forms, qualities, properties, or combinations, whether by hand-labor or by machinery." American Fruit Growers, Inc. v. Brogdex Co., 283 U.S. 1, 11 (1931). Similarly, "composition of matter" has been construed consistent with its common usage to include "all compositions of two or more substances and . . . all composite [***11] articles, whether they be the results of chemical union, or of mechanical mixture, or whether they be gases, fluids, powders or solids." Shell Development Co. v. Watson, 149 F.Supp. 279, 280 (DC 1957) (citing 1 A. Deller, Walker on Patents § 14, p. 55 (1st ed. 1937)). In choosing such expansive terms as "manufacture" and "composition of matter," modified by the comprehensive "any," Congress plainly contemplated that the patent laws would be given wide scope.

The relevant legislative history also supports a broad construction. The Patent Act of 1793, authored by Thomas Jefferson, defined statutory subject matter as "any new and useful art, machine, manufacture, or composition of matter, or any new or useful improvement [thereof]." Act of Feb. 21, 1793, § 1, 1 Stat. 319. The Act embodied Jefferson's philosophy that "ingenuity should receive a liberal encouragement." [*309] 5 Writings of Thomas Jefferson 75-76 (Washington ed. 1871). See Graham v. John Deere Co., 383 U.S. 1, 7-10 (1966). Subsequent patent statutes in 1836, 1870, and 1874 employed this same broad language. In 1952, when the patent laws were recodified, [***12] Congress replaced the word "art" with "process," but otherwise left Jefferson's language intact. The Committee Reports accompanying the 1952 Act inform us that Congress intended statutory subject matter [**2208] to "include anything under the sun that is made by man." S. Rep. No. 1979, 82d Cong., 2d Sess., 5 (1952); H. R. Rep. No. 1923, 82d Cong., 2d Sess., 6 (1952). n6

This is not to suggest that § 101 has no limits or that it embraces every discovery. The laws of nature, physical phenomena, and abstract ideas have [***13] been held not patentable. See Parker v. Flook, 437 U.S. 584 (1978); Gottschalk v. Benson, 409 U.S. 63, 67 (1972); Funk Brothers Seed Co. v. Kalo Inoculant Co., 333 U.S. 127, 130 (1948); O'Reilly v. Morse, 15 How. 62, 112-121 (1854); Le Roy v. Tatham, 14 How. 156, 175 (1853). Thus, a new mineral discovered in the earth or a new plant found in the wild is not patentable subject matter. Likewise, Einstein could not patent his celebrated law that E=mc<2>; nor could Newton have patented the law of gravity. Such discoveries are "manifestations of . . . nature, free to all men and reserved exclusively to none." Funk, supra, at 130.

Judged in this light, respondent's micro-organism plainly qualifies as patentable subject matter. His claim is not to a hitherto unknown natural phenomenon, but to a nonnaturally occurring manufacture or composition of matter — a product of human ingenuity "having a distinctive name, character [and] [*310] use." Hartranft v. Wiegmann, 121 U.S. 609, 615 (1887). [***14] The point is underscored dramatically by comparison of the invention here with that in Funk. There, the patentee had discovered that there existed in nature certain species of root-nodule bacteria which did not exert a mutually inhibitive effect on each other. He used that discovery to produce a mixed culture capable of inoculating the seeds of leguminous plants. Concluding that the patentee had discovered "only some of the handiwork of nature," the Court ruled the product nonpatentable:

"Each of the species of root-nodule bacteria contained in the package infects the same group of leguminous plants which it always infected. No species acquires a different use. The combination of species produces no new bacteria, no change in the six species of bacteria, and no enlargement of the range of their utility. Each species has the same effect it always had. The bacteria perform in their natural way. Their use in combination does not improve in any way their natural functioning. They serve the ends nature originally provided and act quite independently of any effort of the patentee." 333 U.S., at 131.

Here, by contrast, the patentee has produced [***15] a new bacterium with markedly different characteristics from any found in nature and one having the potential for significant utility. His discovery is not nature's handiwork, but his own; accordingly it is patentable subject matter under § 101.

IV. Two contrary arguments are advanced, neither of which we find persuasive.

(A) The petitioner's first argument rests on the enactment of the 1930 Plant Patent Act, which afforded patent protection to certain asexually reproduced plants, and the 1970 Plant [*311] Variety Protection Act, which authorized protection for certain sexually reproduced plants but excluded bacteria from its protection. n7 In the petitioner's [**2209] view, the passage of these Acts evidences congressional understanding that the terms "manufacture" or "composition of matter" do not include living things; if they did, the petitioner argues, neither Act would have been necessary.

We reject this argument. Prior to 1930, two factors were thought to remove plants from patent protection. The first was the belief that plants, even those artificially bred, were products of nature for purposes of the patent law. This position appears to have derived from the decision of the Patent Office in Ex parte Latimer, 1889 Dec. Com. Pat. 123, in which a patent claim for fiber found in the needle of the Pinus australis was rejected. The Commissioner reasoned that a contrary result would permit "patents [to] be obtained upon the trees of the forest and the plants of the earth, which of course would be unreasonable and impossible." Id., at 126. The Latimer case, it seems, came to "[set] forth the general stand taken in these matters" that plants were natural products not subject to patent protection. Thorne, Relation of Patent Law to Natural Products, 6 J. Pat. Off. Soc. 23, 24 (1923). [*312] n8 The second obstacle to patent protection for plants was the fact that plants were thought not amenable to the "written description" requirement of the patent law. See 35 U. S. C. § 112. Because [***17] new plants may differ from old only in color or perfume, differentiation by written description was often impossible. See Hearings on H. R. 11372 before the House Committee on Patents, 71st Cong., 2d Sess., 7 (1930) (memorandum of Patent Commissioner Robertson).

In enacting the Plant Patent Act, Congress addressed both of these concerns. It explained at length its belief that the work of the plant breeder "in aid of nature" was patentable invention. S. Rep. No. 315, 71st [***18] Cong., 2d Sess., 6-8 (1930); H. R. Rep. No. 1129, 71st Cong., 2d Sess., 7-9 (1930). And it relaxed the written description requirement in favor of "a description . . . as complete as is reasonably possible." 35 U. S. C. § 162. No Committee or Member of Congress, however, expressed the broader view, now urged by the petitioner, that the terms "manufacture" or "composition of matter" exclude living things. The sole support for that position in the legislative history of the 1930 Act is found in the conclusory statement of Secretary of Agriculture Hyde, in a letter to the Chairmen of the House and Senate Committees considering the 1930 Act, that "the patent laws . . . at the present time are understood to cover only inventions or discoveries in the field of inanimate nature." See S. Rep. No. 315, supra, at Appendix A; H. R. Rep. No. 1129, supra, at Appendix A. Secretary Hyde's opinion, however, is not entitled to controlling weight. His views were solicited on the administration of the new law and not on the scope of patentable [*313] subject matter —

an area beyond his competence. Moreover, there is language in the House and Senate Committee [***19] Reports suggesting that to the extent Congress considered the matter it found the Secretary's dichotomy unpersuasive. The Reports observe:

[**2210] "There is a clear and logical distinction between the discovery of a new variety of plant and of certain inanimate things, such, for example, as a new and useful natural mineral. The mineral is created wholly by nature unassisted by man. . . . On the other hand, a plant discovery resulting from cultivation is unique, isolated, and is not repeated by nature, nor can it be reproduced by nature unaided by man. . . ." S. Rep. No. 315, supra, at 6; H. R. Rep. No. 1129, supra, at 7 (emphasis added).

Congress thus recognized that the relevant distinction was not between living and inanimate things, but between products of nature, whether living or not, and human-made inventions. Here, respondent's micro-organism is the result of human ingenuity and research. Hence, the passage of the Plant Patent Act affords the Government no support.

Nor does the passage of the 1970 Plant Variety Protection Act support the Government's position. As the Government acknowledges, sexually reproduced plants were not included [***20] under the 1930 Act because new varieties could not be reproduced true-to-type through seedlings. Brief for Petitioner 27, n. 31. By 1970, however, it was generally recognized that true-to-type reproduction was possible and that plant patent protection was therefore appropriate. The 1970 Act extended that protection. There is nothing in its language or history to suggest that it was enacted because § 101 did not include living things.

In particular, we find nothing in the exclusion of bacteria from plant variety protection to support the petitioner's position. See n. 7, supra. The legislative history gives no reason for this exclusion. As the Court of Customs and [*314] Patent Appeals suggested, it may simply reflect congressional agreement with the result reached by that court in deciding In re Arzberger, 27 C. C. P. A. (Pat.) 1315, 112 F.2d 834 (1940), which held that bacteria were not plants for the purposes of the 1930 Act. Or it may reflect the fact that prior to 1970 the Patent Office had issued patents for bacteria under § 101. n9 In any event, absent some clear indication that Congress "focused on [the] issues . . . directly related to [***21] the one presently before the Court," SEC v. Sloan, 436 U.S. 103, 120-121 (1978), there is no basis for reading into its actions an intent to modify the plain meaning of the words found in § 101. See TVA v. Hill, 437 U.S. 153, 189-193 (1978); United States v. Price, 361 U.S. 304, 313 (1960).

(B) The petitioner's second argument is that micro-organisms cannot qualify as patentable subject matter until Congress expressly authorizes such protection. His position rests on the fact that genetic technology was unforeseen when Congress enacted § 101. From this it is argued [***22] that resolution of the patentability of inventions such as respondent's should be left to Congress. The legislative process, the petitioner argues, is best equipped to weigh the competing economic, social, and scientific considerations involved, and to determine whether living organisms produced by genetic engineering should receive patent protection. In support of this position, the petitioner relies on our recent holding in Parker v. Flook, 437 U.S. 584 (1978), and the statement that the judiciary "must proceed cautiously when . . . asked to extend [*315] patent rights into areas wholly unforeseen by Congress." Id., at 596.

[**2211]

It is, of course, correct that Congress, not the courts, must define the limits of patentability; but it is equally true that once Congress has spoken it is "the province and duty of the judicial department to say what the law is." Marbury v. Madison, 1 Cranch 137, 177 (1803). Congress has performed its [***23] constitutional role in defining patentable subject matter in § 101; we perform ours in construing the language Congress has employed. In so doing, our obligation is to take statutes as we find them, guided, if ambiguity appears, by the legislative history and statutory purpose. Here, we perceive no ambiguity. The subject-matter provisions of the patent law have been cast in broad terms to fulfill the constitutional and statutory goal of promoting "the Progress of Science and the useful Arts" with all that means for the social and economic benefits envisioned by Jefferson. Broad general language is not necessarily ambiguous when congressional objectives require broad terms.

Nothing in Flook is to the contrary. That case applied our prior precedents to determine that a "claim for an improved method of calculation, even when tied to a specific end use, is unpatentable subject matter under § 101." 437 U.S., at 595, n. 18. The Court carefully scrutinized the claim at issue to determine whether it was precluded from patent protection under "the principles underlying the prohibition against patents for 'ideas' or phenomena of nature." Id., at 593. [***24] We have done that here. Flook did not announce a new principle that inventions in areas not contemplated by Congress when the patent laws were enacted are unpatentable per se.

To read that concept into Flook would frustrate the purposes of the patent law. This Court frequently has observed that a statute is not to be confined to the "particular [applications] . . . contemplated by the legislators." Barr v. United States, 324 U.S. 83, 90 (1945). Accord, Browder v. United States, 312 U.S. 335, 339 (1941); Puerto Rico v. Shell Co., [*316] 302 U.S. 253, 257 (1937). This is especially true in the field of patent law. A rule that unanticipated inventions are without protection would conflict with the core concept of the patent law that anticipation undermines patentability. See Graham v. John Deere Co., 383 U.S., at 12-17. Mr. Justice Douglas reminded that the inventions most benefiting mankind are those that "push back the frontiers of chemistry, physics, and the like." Great A. & P. Tea Co. v. [***25] Supermarket Corp., 340 U.S. 147, 154 (1950) (concurring opinion). Congress employed broad general language in drafting § 101 precisely because such inventions are often unforeseeable. n10

To buttress his argument, the petitioner, with the support of amicus, points to grave risks that may be generated by research endeavors such as respondent's. The briefs present a gruesome parade of horribles. Scientists, among them Nobel laureates, are quoted suggesting that genetic research may pose a serious threat to the human race, or, [***26] at the very least, that the dangers are far too substantial to permit such research to proceed apace at this time. We are told that genetic research and related technological developments may spread pollution and disease, that it may result in a loss of genetic diversity, and that its practice may tend to depreciate the value of human life. These arguments are forcefully, even passionately, presented; they remind us that, at times, human ingenuity seems unable to control fully the forces it creates — that, with Hamlet, it is sometimes [**2212] better "to bear those ills we have than fly to others that we know not of."

It is argued that this Court should weigh these potential hazards in considering whether respondent's invention is [*317] patentable subject matter under § 101. We disagree. The grant or denial of patents on micro-organisms is not likely to put an end to genetic research or to its attendant risks. The large amount of research that has already occurred when no researcher had sure knowledge that patent protection would be available suggests that legislative or judicial fiat as to patentability will not deter the scientific mind from probing [***27] into the unknown any more than Canute could command the tides. Whether respondent's claims are patentable may determine whether research efforts are accelerated by the hope of reward or slowed by want of incentives, but that is all.

What is more important is that we are without competence to entertain these arguments — either to brush them aside as fantasies generated by fear of the unknown, or to act on them. The choice we are urged to make is a matter of high policy for resolution within the legislative process after the kind of investigation, examination, and study that legislative bodies can provide and courts cannot. That process involves the balancing of competing values and interests, which in our democratic system is the business of elected representatives. Whatever their validity, the contentions now pressed on us should be addressed to the political branches of the Government, the Congress and the Executive, and not to the courts. n11

n11 We are not to be understood as suggesting that the political branches have been laggard in the consideration of the problems related to genetic research and technology. They have already taken action. In 1976, for example, the National Institutes of Health released guidelines for NIH-sponsored genetic research which established conditions under which such research could be performed. 41 Fed. Reg. 27902. In 1978 those guidelines were revised and relaxed. 43 Fed. Reg. 60080, 60108, 60134. And Committees of the Congress have held extensive hearings on these matters. See, e. g., Hearings on Genetic Engineering before the Subcommittee on Health of the Senate Committee on Labor and Public Welfare, 94th Cong., 1st Sess. (1975); Hearings before the Subcommittee on Science, Technology, and Space of the Senate Committee on Commerce, Science, and Transportation, 95th Cong., 1st Sess. (1977); Hearings on H. R. 4759 et al. before the Subcommittee on Health and the Environment of the House Committee on Interstate and Foreign Commerce, 95th Cong., 1st Sess. (1977).

We have emphasized in the recent past that "[our] individual appraisal of the wisdom or unwisdom of a particular [legislative] course . . . is to be put aside in the process of interpreting a statute." TVA v. Hill, 437 U.S., at 194. Our task, rather, is the narrow one of determining what Congress meant by the words it used in the statute; once that is done our powers are exhausted. Congress is free to amend § 101 so as to exclude from patent protection organisms produced by genetic engineering. Cf. 42 U. S. C. § 2181 (a), exempting from patent protection inventions "useful solely in the utilization of special nuclear material or atomic energy in an atomic weapon." Or it may choose to craft a statute specifically designed for such living things. But, until Congress takes such action, this Court must construe the language of § 101 as it is. The language of that section fairly embraces respondent's invention.

Accordingly, the judgment of the Court of Customs and Patent Appeals is Affirmed.

J. E. M. AG SUPPLY, INC., v. PIONEER HI-BRED INTERNATIONAL, INC.

534 U.S. 124 (2001) US Supreme Court

Decided December 10, 2001

CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

Patenting of sexually reproduced plants

Respondent Pioneer Hi-Bred International, Inc. (Pioneer), holds 17 utility patents issued under 35 U.S.C. § 101 that cover the manufacture, use, sale, and offer for sale of its inbred and hybrid corn seed products. Pioneer sells its patented hybrid seeds under a limited label license that allows only the production of grain and/or forage, and prohibits using such seed for propagation or seed multiplication or for the production or development of a hybrid or different seed variety. Petitioner J. E. M. Ag Supply, Inc., doing business as Farm Advantage, Inc., bought patented seeds from Pioneer in bags bearing the license agreement and then resold the bags. Pioneer filed this patent infringement suit against Farm Advantage and distributors and customers of Farm Advantage (collectively Farm Advantage or petitioners). Farm Advantage filed a patent invalidity counterclaim, arguing that sexually reproducing plants, such as Pioneer's corn plants, are not patentable subject matter within §101. Farm Advantage maintained that the Plant Patent Act of 1930 (PPA) and the Plant Variety Protection Act (PVPA) set forth the exclusive statutory means for protecting plant life because these statutes are more specific than §101, and thus each carves out subject matter from §101 for special treatment. The District Court granted Pioneer summary judgment. Relying on this Court's broad construction of §101 in Diamond v. Chakrabarty, 447 U.S. 303, the District Court held that §101 clearly covers plant life. It also held that in enacting the PPA and the PVPA, Congress neither expressly nor implicitly removed plants from §101's subject matter. In particular, the District Court noted that Congress did not implicitly repeal §101 by passing the more specific PVPA because there was no irreconcilable conflict between the two statutes. The Federal Circuit affirmed.

Held: Newly developed plant breeds fall within the subject matter of §101, and neither the PPA nor the PVPA limits the scope of §101's coverage. Pp. 421.

(a) In approaching the question presented here, this Court is mindful that it has already recognized that §101's language is extremely broad and has concluded that living things are patentable under that provision, Chakrabarty, supra, at 308, 313, 315. Since 1985, the Patent and Trademark Office (PTO) has had an unbroken practice of conferring utility patents for plants. Nonetheless, petitioners argue that the PPA and the PVPA are the exclusive means of protecting new varieties of plants, and so awarding utility patents for plants upsets the scheme contemplated by Congress. Pp. 46.

(b) Neither the PPA's original nor its recodified text indicates that its protection for asexually reproduced plants was intended to be exclusive. The 1930 PPA amended the general patent provision to protect only the asexual reproduction of a plant. And Congress' 1952 revision, which placed plant patents into a separate chapter 15, was only a housekeeping measure that did not change the substantive rights or the relaxed requirements for such patents. Plant patents under the PPA thus continue to have very limited coverage and less stringent requirements than §101 utility patents. Importantly, chapter 15 nowhere states that plant patents are the exclusive means of granting intellectual property protection to plants. The arguments that petitioners advance for why the PPA should preclude assigning utility patents for plants are unpersuasive because petitioners fail to take account of the forward-looking perspective of the utility patent statute and the reality of plant breeding in 1930. Pp. 613.

(c) That the PVPA specifically authorizes limited patent-like protection for certain sexually reproduced plants does not evidence Congress' intent to deny broader §101 utility patent protection for such plants. While the PVPA creates a comprehensive statutory scheme with respect to its particular protections and subject matter, giving limited protection to plant varieties that are new, distinct, uniform, and stable, nowhere does it restrict the scope of patentable subject matter under §101. The PVPA contains no statement of exclusivity. Furthermore, at the time the PVPA was enacted, the PTO had already issued numerous utility patents for hybrid plant processes, which reaffirms that such material was within §101's scope. Petitioners also err in arguing that the PVPA altered §101's subject-matter coverage by implication. Repeal by implication requires that the earlier and later statutes be irreconcilable, Morton v. Mancari, 417 U.S. 535, 550. The differences in the requirements for, and coverage of, utility patents and PVPA plant variety certificates, however, do not present irreconcilable conflicts because the requirements for a §101 utility patent are more stringent than those for a PVP certificate, and the protections afforded by a utility patent are greater than those afforded by a PVP certificate. Petitioners' suggestion that dual protection cannot exist when statutes overlap and purport to protect the same commercially valuable attribute or thing is rejected as well. This Court has given effect to two overlapping statutes, so long as each reaches some distinct cases, see Connecticut Nat. Bank v. Germain, 503 U.S. 249, 253, and it has allowed dual protection in other intellectual property cases, see, e.g., Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 484. In this case, many plant varieties that are unable to satisfy §101's stringent requirements might still qualify for the PVPA's lesser protections. Pp. 1320.

(d) The PTO has assigned utility patents for plants for at least 16 years, and there has been no indication from either Congress or agencies with expertise that such coverage is inconsistent with the PVPA or the PPA. Congress has not only failed to pass legislation indicating that it disagrees with the PTO's interpretation of §101; it has even recognized the availability of utility patents for plants. P. 20.

WARNER JENKINSON COMPANY, INC., PETITIONER v. HILTON DAVIS CHEMICAL CO. 520 U.S. 17 (1997)

Decided March 3, 1997

On writ of certiorari to the United states court of Appeals for the Federal Circuit

DOCTRINE OF EQUIVALENTS

Nearly 50 years ago, this Court in Graver Tank & Mfg. Co. v. Linde Air Products Co., 339 U.S. 605 (1950), set out the modern contours of what is known in patent law as the "doctrine of equivalents." Under this doctrine, a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is "equivalence" between the elements of the accused product or process and the claimed elements of the patented invention. Id., at 609. Petitioner, which was found to have infringed upon respondent's patent under the doctrine of equivalents, invites us to speak the death of that doctrine. We decline that invitation. The significant disagreement within the Court of Appeals for the Federal Circuit concerning the application of Graver Tank suggests, however, that the doctrine is not free from confusion. We therefore will endeavor to clarify the proper scope of the doctrine.

The essential facts of this case are few. Petitioner Warner Jenkinson Co. and respondent Hilton Davis Chemical Co. manufacture dyes. Impurities in those dyes must be removed. Hilton Davis holds United States Patent No. 4,560,746 ('746 patent), which discloses an improved purification process involving "ultrafiltration." The '746 process filters impure dye through a porous membrane at certain pressures and pH levels, [n.1] resulting in a high purity dye product.

The '746 patent issued in 1985. As relevant to this case, the patent claims as its invention an improvement in the ultrafiltration process as follows:

"In a process for the purification of a dye . . . the improvement which comprises: subjecting an aqueous solution . . . to ultrafiltration through a membrane having a nominal pore diameter of 5-15 Angstroms under a hydrostatic pressure of approximately 200 to 400 p.s.i.g., at a pH from approximately 6.0 to 9.0, to thereby cause separation of said impurities from said dye . . . ." App. 36-37 (emphasis added).

The inventors added the phrase "at a pH from approximately 6.0 to 9.0" during patent prosecution. At a minimum, this phrase was added to distinguish a previous patent (the "Booth" patent) that disclosed an ultrafiltration process operating at a pH above 9.0. The parties disagree as to why the low end pH limit of 6.0 was included as part of the claim. [n.2]

In 1986, Warner Jenkinson developed an ultrafiltration process that operated with membrane pore diameters assumed to be 5-15 Angstroms, at pressures of 200 to nearly 500 p.s.i.g., and at a pH of 5.0. Warner Jenkinson did not learn of the '746 patent until after it had begun commercial use of its ultrafiltration process. Hilton Davis eventually learned of Warner Jenkinson's use of ultrafiltration and, in 1991, sued Warner Jenkinson for patent infringement.

As trial approached, Hilton Davis conceded that there was no literal infringement, and relied solely on the doctrine of equivalents. Over Warner Jenkinson's objection that the doctrine of equivalents was an equitable doctrine to be applied by the court, the issue of equivalence was included among those sent to the jury. The jury found that the '746 patent was not invalid and that Warner Jenkinson infringed upon the patent under the doctrine of equivalents. The jury also found, however, that Warner Jenkinson had not intentionally infringed, and therefore awarded only 20% of the damages sought by Hilton Davis. The District Court denied Warner Jenkinson's post-trial motions, and entered a permanent injunction prohibiting Warner Jenkinson from practicing ultrafiltration below 500 p.s.i.g. and below 9.01 pH. A fractured en banc Court of Appeals for the Federal Circuit affirmed. 62 F. 3d 1512 (CA Fed. 1995).

The majority below held that the doctrine of equivalents continues to exist and that its touchstone is whether substantial differences exist between the accused process and the patented process. Id., at 1521-1522. The court also held that the question of equivalence is for the jury to decide and that the jury in this case had substantial evidence from which it could conclude that the Warner Jenkinson process was not substantially different from the ultrafiltration process disclosed in the '746 patent. Id., at 1525.

There were three separate dissents, commanding a total of 5 of 12 judges. Four of the five dissenting judges viewed the doctrine of equivalents as allowing an improper expansion of claim scope, contrary to this Court's numerous holdings that it is the claim that defines the invention and gives notice to the public of the limits of the patent monopoly. Id., at 1537-1538 (Plager, J., dissenting). The fifth dissenter, the late Judge Nies, was able to reconcile the prohibition against enlarging the scope of claims and the doctrine of equivalents by applying the doctrine to each element of a claim, rather than to the accused product or process "overall." Id., at 1574 (Nies, J., dissenting). As she explained it, "[t]he `scope' is not enlarged if courts do not go beyond the substitution of equivalent elements." Ibid. All of the dissenters, however, would have found that a much narrowed doctrine of equivalents may be applied in whole or in part by the court. Id., at 1540-1542 (Plager, J., dissenting); id., at 1579 (Nies, J., dissenting).

We granted certiorari, 516 U. S. ___ (1996), and now reverse and remand.

In Graver Tank we considered the application of the doctrine of equivalents to an accused chemical composition for use in welding that differed from the patented welding material by the substitution of one chemical element. 339 U. S., at 610. The substituted element did not fall within the literal terms of the patent claim, but the Court nonetheless found that the "question which thus emerges is whether the substitution [of one element for the other] . . . is a change of such substance as to make the doctrine of equivalents inapplicable; or conversely, whether under the circumstances the change was so insubstantial that the trial court's invocation of the doctrine of equivalents was justified." Ibid. The Court also described some of the considerations that go into applying the doctrine of equivalents:

"What constitutes equivalency must be determined against the context of the patent, the prior art, and the particular circumstances of the case. Equivalence, in the patent law, is not the prisoner of a formula and is not an absolute to be considered in a vacuum. It does not require complete identity for every purpose and in every respect. In determining equivalents, things equal to the same thing may not be equal to each other and, by the same token, things for most purposes different may sometimes be equivalents. Consideration must be given to the purpose for which an ingredient is used in a patent, the qualities it has when combined with the other ingredients, and the function which it is intended to perform. An important factor is whether persons reasonably skilled in the art would have known of the interchangeability of an ingredient not contained in the patent with one that was." Id., at 609.

Considering those factors, the Court viewed the difference between the chemical element claimed in the patent and the substitute element to be "colorable only," and concluded that the trial court's judgment of infringement under the doctrine of equivalents was proper. Id., at 612.

Petitioner's primary argument in this Court is that the doctrine of equivalents, as set out in Graver Tank in 1950, did not survive the 1952 revision of the Patent Act, 35 U.S.C. § 100 et seq., because it is inconsistent with several aspects of that Act. In particular, petitioner argues: (1) the doctrine of equivalents is inconsistent with the statutory requirement that a patentee specifically "claim" the invention covered by a patent, 35 U.S.C. § 112; (2) the doctrine circumvents the patent reissue process—designed to correct mistakes in drafting or the like—and avoids the express limitations on that process, 35 U.S.C. §§ 251-252; (3) the doctrine is inconsistent with the primacy of the Patent and Trademark Office (PTO) in setting the scope of a patent through the patent prosecution process; and (4) the doctrine was implicitly rejected as a general matter by Congress' specific and limited inclusion of the doctrine in one section regarding "means" claiming, 35 U.S.C. § 112 ¶6. All but one of these arguments were made in Graver Tank in the context of the 1870 Patent Act, and failed to command a majority. [n.3]

The 1952 Patent Act is not materially different from the 1870 Act with regard to claiming, reissue, and the role of the PTO. Compare, e.g., 35 U.S.C. § 112 ("The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention") with The Consolidated Patent Act of 1870, ch. 230, §26, 16 Stat. 198, 201 (the applicant "shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery"). Such minor differences as exist between those provisions in the 1870 and the 1952 Acts have no bearing on the result reached in Graver Tank, and thus provide no basis for our overruling it. In the context of infringement, we have already held that pre-1952 precedent survived the passage of the 1952 Act. See Aro Mfg. Co. v. Convertible Top Replacement Co., 365 U.S. 336, 342 (1961) (new section defining infringement "left intact the entire body of case law on direct infringement"). We see no reason to reach a different result here. [n.4]

Petitioner's fourth argument for an implied congressional negation of the doctrine of equivalents turns on the reference to "equivalents" in the "means" claiming provision of the 1952 Act. Section 112, ¶6, a provision not contained in the 1870 Act, states:

"An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." (Emphasis added.)

Thus, under this new provision, an applicant can describe an element of his invention by the result accomplished or the function served, rather than describing the item or element to be used (e.g., "a means of connecting Part A to Part B," rather than "a two penny nail"). Congress enacted §112, ¶6 in response to Halliburton Oil Well Cementing Co. v. Walker, which rejected claims that "do not describe the invention but use `conveniently functional language at the exact point of novelty,' " 329 U.S. 1, 8 (1946) (citation omitted). See In re Donaldson Co., 16 F. 3d 1189, 1194 (CA Fed. 1994) (Congress enacted predecessor of §112, ¶6 in response to Halliburton); In re Fuetterer, 319 F. 2d 259, 264, n. 11 (CCPA 1963) (same); see also, 2 D. Chisum, Patents §8.04[2], at 63-64 (1996) (discussing 1954 commentary of then Chief Patent Examiner P. J. Federico). Section 112, ¶6 now expressly allows so called "means" claims, with the proviso that application of the broad literal language of such claims must be limited to only those means that are "equivalent" to the actual means shown in the patent specification. This is an application of the doctrine of equivalents in a restrictive role, narrowing the application of broad literal claim elements. We recognized this type of role for the doctrine of equivalents in Graver Tank itself. 339 U. S., at 608-609. The added provision, however, is silent on the doctrine of equivalents as applied where there is no literal infringement.

Because §112, ¶6 was enacted as a targeted cure to a specific problem, and because the reference in that provision to "equivalents" appears to be no more than a prophylactic against potential side effects of that cure, such limited congressional action should not be overread for negative implications. Congress in 1952 could easily have responded to Graver Tank as it did to the Halliburton decision. But it did not. Absent something more compelling than the dubious negative inference offered by petitioner, the lengthy history of the doctrine of equivalents strongly supports adherence to our refusal in Graver Tank to find that the Patent Act conflicts with that doctrine. Congress can legislate the doctrine of equivalents out of existence any time it chooses. The various policy arguments now made by both sides are thus best addressed to Congress, not this Court.

We do, however, share the concern of the dissenters below that the doctrine of equivalents, as it has come to be applied since Graver Tank, has taken on a life of its own, unbounded by the patent claims. There can be no denying that the doctrine of equivalents, when applied broadly, conflicts with the definitional and public notice functions of the statutory claiming requirement. Judge Nies identified one means of avoiding this conflict:

"[A] distinction can be drawn that is not too esoteric between substitution of an equivalent for a component in an invention and enlarging the metes and bounds of the invention beyond what is claimed.

"Where a claim to an invention is expressed as a combination of elements, as here, `equivalents' in the sobriquet `Doctrine of Equivalents' refers to the equivalency of an element or part of the invention with one that is substituted in the accused product or process.

"This view that the accused device or process must be more than `equivalent' overall reconciles the Supreme Court's position on infringement by equivalents with its concurrent statements that `the courts have no right to enlarge a patent beyond the scope of its claims as allowed by the Patent Office.' [Citations omitted.] The `scope' is not enlarged if courts do not go beyond the substitution of equivalent elements." 62 F. 3d, at 1573-1574 (Nies, J., dissenting) (emphasis in original).

We concur with this apt reconciliation of our two lines of precedent. Each element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole. It is important to ensure that the application of the doctrine, even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety. So long as the doctrine of equivalents does not encroach beyond the limits just described, or beyond related limits to be discussed infra, at 11-15, 20, n. 8, and 21-22, we are confident that the doctrine will not vitiate the central functions of the patent claims themselves.

Understandably reluctant to assume this Court would overrule Graver Tank, petitioner has offered alternative arguments in favor of a more restricted doctrine of equivalents than it feels was applied in this case. We address each in turn.

Petitioner first argues that Graver Tank never purported to supersede a well established limit on non literal infringement, known variously as "prosecution history estoppel" and "file wrapper estoppel." See Bayer Aktiengesellschaft v. Duphar Int'l Research B.V., 738 F. 2d 1237, 1238 (CA Fed. 1984). According to petitioner, any surrender of subject matter during patent prosecution, regardless of the reason for such surrender, precludes recapturing any part of that subject matter, even if it is equivalent to the matter expressly claimed. Because, during patent prosecution, respondent limited the pH element of its claim to pH levels between 6.0 and 9.0, petitioner would have those limits form bright lines beyond which no equivalents may be claimed. Any inquiry into the reasons for a surrender, petitioner claims, would undermine the public's right to clear notice of the scope of the patent as embodied in the patent file.

We can readily agree with petitioner that Graver Tank did not dispose of prosecution history estoppel as a legal limitation on the doctrine of equivalents. But petitioner reaches too far in arguing that the reason for an amendment during patent prosecution is irrelevant to any subsequent estoppel. In each of our cases cited by petitioner and by the dissent below, prosecution history estoppel was tied to amendments made to avoid the prior art, or otherwise to address a specific concern—such as obviousness—that arguably would have rendered the claimed subject matter unpatentable. Thus, in Exhibit Supply Co. v. Ace Patents Corp., Chief Justice Stone distinguished inclusion of a limiting phrase in an original patent claim from the "very different" situation in which "the applicant, in order to meet objections in the Patent Office, based on references to the prior art, adopted the phrase as a substitute for the broader one" previously used. 315 U.S. 126, 136 (1942) (emphasis added). Similarly, in Keystone Driller Co. v. Northwest Engineering Corp., 294 U.S. 42 (1935), estoppel was applied where the initial claims were "rejected on the prior art," id., at 48, n. 6, and where the allegedly infringing equivalent element was outside of the revised claims and within the prior art that formed the basis for the rejection of the earlier claims, id., at 48. [n.5]

It is telling that in each case this Court probed the reasoning behind the Patent Office's insistence upon a change in the claims. In each instance, a change was demanded because the claim as otherwise written was viewed as not describing a patentable invention at all—typically because what it described was encompassed within the prior art. But, as the United States informs us, there are a variety of other reasons why the PTO may request a change in claim language. Brief for United States as Amicus Curiae 22-23 (counsel for the PTO also appearing on the brief). And if the PTO has been requesting changes in claim language without the intent to limit equivalents or, indeed, with the expectation that language it required would in many cases allow for a range of equivalents, we should be extremely reluctant to upset the basic assumptions of the PTO without substantial reason for doing so. Our prior cases have consistently applied prosecution history estoppel only where claims have been amended for a limited set of reasons, and we see no substantial cause for requiring a more rigid rule invoking an estoppel regardless of the reasons for a change. [n.6]

In this case, the patent examiner objected to the patent claim due to a perceived overlap with the Booth patent, which revealed an ultrafiltration process operating at a pH above 9.0. In response to this objection, the phrase "at a pH from approximately 6.0 to 9.0" was added to the claim. While it is undisputed that the upper limit of 9.0 was added in order to distinguish the Booth patent, the reason for adding the lower limit of 6.0 is unclear. The lower limit certainly did not serve to distinguish the Booth patent, which said nothing about pH levels below 6.0. Thus, while a lower limit of 6.0, by its mere inclusion, became a material element of the claim, that did not necessarily preclude the application of the doctrine of equivalents as to that element. See Hubbell v. United

States, 179 U.S. 77, 82 (1900) (" `[A]ll [specified elements] must be regarded as material,' " though it remains an open " `question whether an omitted part is supplied by an equivalent device or instrumentality' " (citation omitted)). Where the reason for the change was not related to avoiding the prior art, the change may introduce a new element, but it does not necessarily preclude infringement by equivalents of that element. [n.7]

We are left with the problem, however, of what to do in a case like the one at bar, where the record seems not to reveal the reason for including the lower pH limit of 6.0. In our view, holding that certain reasons for a claim amendment may avoid the application of prosecution history estoppel is not tantamount to holding that the absence of a reason for an amendment may similarly avoid such an estoppel. Mindful that claims do indeed serve both a definitional and a notice function, we think the better rule is to place the burden on the patent holder to establish the reason for an amendment required during patent prosecution. The court then would decide whether that reason is sufficient to overcome prosecution history estoppel as a bar to application of the doctrine of equivalents to the element added by that amendment. Where no explanation is established, however, the court should presume that the PTO had a substantial reason related to patentability for including the limiting element added by amendment. In those circumstances, prosecution history estoppel would bar the application of the doctrine equivalents as to that element. The presumption we have described, one subject to rebuttal if an appropriate reason for a required amendment is established, gives proper deference to the role of claims in defining an invention and providing public notice, and to the primacy of the PTO in ensuring that the claims allowed cover only subject matter that is properly patentable in a proffered patent application. Applied in this fashion, prosecution history estoppel places reasonable limits on the doctrine of equivalents, and further insulates the doctrine from any feared conflict with the Patent Act.

Because respondent has not proffered in this Court a reason for the addition of a lower pH limit, it is impossible to tell whether the reason for that addition could properly avoid an estoppel. Whether a reason in fact exists, but simply was not adequately developed, we cannot say. On remand, the Federal Circuit can consider whether reasons for that portion of the amendment were offered or not and whether further opportunity to establish such reasons would be proper.

Petitioner next argues that even if Graver Tank remains good law, the case held only that the absence of substantial differences was a necessary element for infringement under the doctrine of equivalents, not that it was sufficient for such a result. Brief for Petitioner 32. Relying on Graver Tank's references to the problem of an "unscrupulous copyist" and "piracy," 339 U. S., at 607, petitioner would require judicial exploration of the equities of a case before allowing application of the doctrine of equivalents. To be sure, Graver Tank refers to the prevention of copying and piracy when describing the benefits of the doctrine of equivalents. That the doctrine produces such benefits, however, does not mean that its application is limited only to cases where those particular benefits are obtained.

Elsewhere in Graver Tank the doctrine is described in more neutral terms. And the history of the doctrine as relied upon by Graver Tank reflects a basis for the doctrine not so limited as petitioner would have it. In Winans v. Denmead, 15 How. 330, 343 (1854), we described the doctrine of equivalents as growing out of a legally implied term in each patent claim that "the claim extends to the thing patented, however its form or proportions may be varied." Under that view, application of the doctrine of equivalents involves determining whether a particular accused product or process infringes upon the patent claim, where the claim takes the form—half express, half implied—of "X and its equivalents."

Machine Co. v. Murphy, 97 U.S. 120, 125 (1878), on which Graver Tank also relied, offers a similarly intent neutral view of the doctrine of equivalents:

"[T]he substantial equivalent of a thing, in the sense of the patent law, is the same as the thing itself; so that if two devices do the same work in substantially the same way, and accomplish substantially the same result, they are the same, even though they differ in name, form, or shape."

If the essential predicate of the doctrine of equivalents is the notion of identity between a patented invention and its equivalent, there is no basis for treating an infringing equivalent any differently than a device that infringes the express terms of the patent. Application of the doctrine of equivalents, therefore, is akin to determining literal infringement, and neither requires proof of intent.

Petitioner also points to Graver Tank's seeming reliance on the absence of independent experimentation by the alleged infringer as supporting an equitable defense to the doctrine of equivalents. The Federal Circuit explained this factor by suggesting that an alleged infringer's behavior, be it copying, designing around a patent, or independent experimentation, indirectly reflects the substantiality of the differences between the patented invention and the accused device or process. According to the Federal Circuit, a person aiming to copy or aiming to avoid a patent is imagined to be at least marginally skilled at copying or avoidance, and thus intentional copying raises an inference—rebuttable by proof of independent development—of having only insubstantial differences, and intentionally designing around a patent claim raises an inference of substantial differences. This explanation leaves much to be desired. At a minimum, one wonders how ever to distinguish between the intentional copyist making minor changes to lower the risk of legal action, and the incremental innovator designing around the claims, yet seeking to capture as much as is permissible of the patented advance.

But another explanation is available that does not require a divergence from generally objective principles of patent infringement. In both instances in Graver Tank where we referred to independent research or experiments, we were discussing the known interchangeability between the chemical compound claimed in the patent and the compound substituted by the alleged infringer. The need for independent experimentation thus could reflect knowledge—or lack thereof—of interchangeability possessed by one presumably skilled in the art. The known interchangeability of substitutes for an element of a patent is one of the express objective factors noted by Graver Tank as bearing upon whether the accused device is substantially the same as the patented invention. Independent experimentation by the alleged infringer would not always reflect upon the objective question whether a person skilled in the art would have known of the interchangeability between two elements, but in many cases it would likely be probative of such knowledge.

Although Graver Tank certainly leaves room for petitioner's suggested inclusion of intent based elements in the doctrine of equivalents, we do not read it as requiring them. The better view, and the one consistent with Graver Tank's predecessors and the objective approach to infringement, is that intent plays no role in the application of the doctrine of equivalents.

Finally, petitioner proposes that in order to minimize conflict with the notice function of patent claims, the doctrine of equivalents should be limited to equivalents that are disclosed within the patent itself. A milder version of this argument, which found favor with the dissenters below, is that the doctrine should be limited to equivalents that were known at the time the patent was issued, and should not extend to after arising equivalents.

As we have noted, supra, at 17, with regard to the objective nature of the doctrine, a skilled practitioner's knowledge of the interchangeability between claimed and accused elements is not relevant for its own sake, but rather for what it tells the fact finder about the similarities or differences between those elements. Much as the perspective of the hypothetical "reasonable person" gives content to concepts such as "negligent" behavior, the perspective of a skilled practitioner provides content to, and limits on, the concept of "equivalence." Insofar as the question under the doctrine of equivalents is whether an accused element is equivalent to a claimed element, the proper time for evaluating equivalency—and thus knowledge of interchangeability between elements— is at the time of infringement, not at the time the patent was issued. And rejecting the milder version of petitioner's argument necessarily rejects the more severe proposition that equivalents must not only be known, but must also be actually disclosed in the patent in order for such equivalents to infringe upon the patent.

The various opinions below, respondents, and amici devote considerable attention to whether application of the doctrine of equivalents is a task for the judge or for the jury. However, despite petitioner's argument below that the doctrine should be applied by the judge, in this Court petitioner makes only passing reference to this issue. See Brief for Petitioner 22, n. 15 ("If this Court were to hold in Markman v. Westview Instruments, Inc., No. 95-26 (argued Jan. 8, 1996), that judges rather than juries are to construe patent claims, so as to provide a uniform definition of the scope of the legally protected monopoly, it would seem at cross purposes to say that juries may nonetheless expand the claims by resort to a broad notion of `equivalents' "); Reply Brief for Petitioner 20 (whether judge or jury should apply the doctrine of equivalents depends on how the Court views the nature of the inquiry under the doctrine of equivalents).

Petitioner's comments go more to the alleged inconsistency between the doctrine of equivalents and the claiming requirement than to the role of the jury in applying the doctrine as properly understood. Because resolution of whether, or how much of, the application of the doctrine of equivalents can be resolved by the court is not necessary for us to answer the question presented, we decline to take it up. The Federal Circuit held that it was for the jury to decide whether the accused process was equivalent to the claimed process. There was ample support in our prior cases for that holding. See, e.g., Machine Co. v. Murphy, 97 U. S., at 125 ("in determining the question of infringement, the court or jury, as the case may be, . . . are to look at the machines or their several devices or elements in the light of what they do, or what office or function they perform, and how they perform it, and to find that one thing is substantially the same as another, if it performs substantially the same function in substantially the same way to obtain the same result"); Winans v. Denmead, 15 How., at 344 ("[It] is a question for the jury" whether the accused device was "the same in kind, and effected by the employment of [the patentee's] mode of operation in substance"). Nothing in our recent Markman decision necessitates a different result than that reached by the Federal Circuit. Indeed, Markman cites with considerable favor, when discussing the role of judge and jury, the seminal Winans decision. Markman v. Westview Instruments, Inc., 517 U. S. ___ (1996) (slip op., at 14). Whether, if the issue were squarely presented to us, we would reach a different conclusion than did the Federal Circuit is not a question we need decide today. [n.8]

All that remains is to address the debate regarding the linguistic framework under which "equivalence" is determined. Both the parties and the Federal Circuit spend considerable time arguing whether the so called "triple identity" test—focusing on the function served by a particular claim element, the way that element serves that function, and the result thus obtained by that element—is a suitable method for determining equivalence, or whether an "insubstantial differences" approach is better. There seems to be substantial agreement that, while the triple identity test may be suitable for analyzing mechanical devices, it often provides a poor framework for analyzing other products or processes. On the other hand, the insubstantial differences test offers little additional guidance as to what might render any given difference "insubstantial."

In our view, the particular linguistic framework used is less important than whether the test is probative of the essential inquiry: Does the accused product or process contain elements identical or equivalent to each claimed element of the patented invention? Different linguistic frameworks may be more suitable to different cases, depending on their particular facts. A focus on individual elements and a special vigilance against allowing the concept of equivalence to eliminate completely any such elements should reduce considerably the imprecision of whatever language is used. An analysis of the role played by each element in the context of the specific patent claim will thus inform the inquiry as to whether a substitute element matches the function, way, and result of the claimed element, or whether the substitute element plays a role substantially different from the claimed element. With these limiting principles as a backdrop, we see no purpose in going further and micro managing the Federal Circuit's particular word choice for analyzing equivalence. We expect that the Federal Circuit will refine the formulation of the test for equivalence in the orderly course of case by case determinations, and we leave such refinement to that court's sound judgment in this area of its special expertise.

Today we adhere to the doctrine of equivalents. The determination of equivalence should be applied as an objective inquiry on an element by element basis. Prosecution history estoppel continues to be available as a defense to infringement, but if the patent holder demonstrates that an amendment required during prosecution had a purpose unrelated to patentability, a court must consider that purpose in order to decide whether an estoppel is precluded. Where the patent holder is unable to establish such a purpose, a court should presume that the purpose behind the required amendment is such that prosecution history estoppel would apply. Because the Court of Appeals for the Federal Circuit did not consider all of the requirements as described by us today, particularly as related to prosecution history estoppel and the preservation of some meaning for each element in a claim, we reverse and remand for further proceedings consistent with this opinion.

It is so ordered.

FESTO CORP. v. SHOKETSU KINZOKU KOGYO KABUSHIKI CO., LTD., 535 U.S. 722 (2002) US Supreme Court

Decided May 28, 2002

CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

DOCTRINE OF EQUIVALENCE

Petitioner Festo Corporation owns two patents for an industrial device. When the patent examiner rejected the initial application for the first patent because of defects in description, 35 U.S. C. §112, the application was amended to add the new limitations that the device would contain a pair of one-way sealing rings and that its outer sleeve would be made of a magnetizable material. The second patent was also amended during a reexamination proceeding to add the sealing rings limitation. After Festo began selling its device, respondents (hereinafter SMC) entered the market with a similar device that uses one two-way sealing ring and a nonmagnetizable sleeve . Festo filed suit, claiming that SMC's device is so similar that it infringes Festo's patents under the doctrine of equivalents. The District Court ruled for Festo, rejecting SMC's argument that the prosecution history estopped Festo from saying that SMC's device is equivalent A Federal Circuit panel initially affirmed, but this Court granted certiorari, vacated, and remanded in light of Warner-Jenkinson Co. v. Hilton Davis Chemical Co., 520 U.S. 17, 29, which had acknowledged thatcompetitors may rely on the prosecution history to estop the patentee from recapturing subject matter surrendered by amendment as a condition of obtaining the patent. On remand, the en banc Federal Circuit reversed, holding that prosecution history estoppel applied.

The court ruled that estoppel arises from any amendment that narrows a claim to comply with the Patent Act, not only from amendments made to avoid the prior art, as the District Court had held. The Federal Circuit also held that, when estoppel applies, it bars any claim of equivalence for the element that was amended. The court acknowledged that, under its prior cases, prosecution history estoppel constituted a flexible bar, foreclosing some, but not all, claims of equivalence, depending on the purpose of the amendment and the alterations in the text. However, the court overruled its precedents on the ground that their case-by-case approach had proved unworkable.

Held: Prosecution history estoppel may apply to any claim amendment made to satisfy the Patent Act's requirements, not just to amendments made to avoidthe prior art, but estoppel need not bar suit against every equivalent to the amended claim element. Pp. 5—17.

(a) To enable a patent holder to know what he owns, and the public to know what he does not, the inventor must describe his work in "full, clear, concise, and exact terms." §112. However, patent claim language may not describe with complete precision the range of an invention's novelty. If patents were always interpreted by their literal terms, their value would be greatly diminished. Insubstantial substitutes for certain elements could defeat the patent, and its value to inventors could be destroyed by simple acts of copying. Thus, a patent's scope is not limited to its literal terms, but embraces all equivalents to the claims described. See Winans v. Denmead, 15 How. 330, 347. Nevertheless, because it may be difficult to determine what is, or is not, an equivalent, competitors may be deterred from engaging in legitimate manufactures outside the patent's limits, or lulled into developing competing products that the patent secures, thereby prompting wasteful litigation. Each time the Court has considered the doctrine of equivalents, it has acknowledged this uncertainty as the price of ensuring the appropriate incentives for innovation, and it has affirmed the doctrine over dissents that urged a more certain rule. See, e.g., id., at 343, 347. Most recently, Warner-Jenkinson, supra, at 28, reaffirmed the doctrine. Pp. 5—8.

(b) Prosecution history estoppel requires that patent claims be interpreted in light of the proceedings before the Patent and Trademark Office (PTO).

When the patentee originally claimed the subject matter alleged to infringe but then narrowed the claim in response to a rejection, he may not argue that the surrendered territory comprised an unforeseen equivalent. See Exhibit Supply Co. v. Ace Patents Corp., 315 U.S. 126, 136—137. The rejection indicates that the patent examiner does not believe the original claim could be patented. While the patentee has the right to appeal, his decision to forgo an appeal and submit an amended claim is taken as a concession that the invention as patented does not reach as far as the original claim. See, e.g., Goodyear Dental Vulcanite Co. v. Davis, 102 U.S. 222, 228.

Were it otherwise, the inventor might avoid the PTO's gatekeeping role and seek to recapture in an infringement action the very subject matter surrendered as a condition of receiving the patent. Pp. 8—9.

(c) Prosecution history estoppel is not limited to amendments intended to narrow the patented invention's subject matter, e.g., to avoid prior art, but may apply to a narrowing amendment made to satisfy any Patent Act requirement, including §112's requirements concerning the patent application's form. In Warner-Jenkinson, the Court made clear that estoppel applies to amendments made for a "substantial reason related to patentability," 520 U.S., at 33, but did not purport to catalog every reason that might raise an estoppel. Indeed, it stated that even if the amendment's purpose were unrelated to patentability, the court might consider whether it was the kind of reason that nonetheless might require estoppel. Id., at 40—41. Simply because estoppel has been discussed most often in the context of amendments made to avoid the prior art, see, e.g., id., at 30, it does not follow that amendments made for other purposes will not give rise to estoppel. Section 112 requires that the application describe, enable, and set forth the best mode of carrying out the invention.

The patent should not issue if these requirements are not satisfied, and an applicant's failure to meet them could lead to the issued patent being held invalid in later litigation. Festo's argument that amendments made to comply with §112 concern the application's form and not the invention's subject matter conflates the patentee's reason for making the amendment with the impact the amendment has on the subject matter. Estoppel arises when an amendment is made to secure the patent and the amendment narrows the patent's scope. If a §112 amendment is truly cosmetic, it would not narrow the patent's scope or raise an estoppel. But if a §112 amendment is necessary and narrows the patent's scope–even if only for better description–estoppel may apply. Pp. 10—12.

(d) Prosecution history estoppel does not bar the inventor from asserting infringement against every equivalent to the narrowed element. Though estoppel can bar challenges to a wide range of equivalents, its reach requires an examination of the subject matter surrendered by the narrowing amendment. The Federal Circuit's complete bar rule is inconsistent with the purpose of applying the estoppel in the first place–to hold the inventor to the representations made during the application process and the inferences that may be reasonably drawn from the amendment. By amending the application, the inventor is deemed to concede that the patent does not extend as far as the original claim, not that the amended claim is so perfect in its description that no one could devise an equivalent. The Court's view is consistent with precedent and PTO practice.

The Court has consistently applied the doctrine in a flexible way, considering what equivalents were surrendered during a patent's prosecution, rather than imposing a complete bar that resorts to the very literalism the equivalents rule is designed to overcome. E.g., Goodyear Dental Vulcanite Co. v. Davis, 102 U.S. 222, 230. The Federal Circuit ignored Warner-Jenkinson 's instruction that courts must be cautious before adopting changes that disrupt the settled expectations of the inventing community. See 520 U.S., at 28. Inventors who amended their claims under the previous case law had no reason to believe they were conceding all equivalents. Had they known, they might have appealed the rejection instead. Warner-Jenkinson struck the appropriate balance by placing the burden on the patentee to prove that an amendment was not made for a reason that would give rise to estoppel. Id., at 33. Similarly, the patentee should bear the burden of showing that the amendment does not surrender the particular equivalent in question. As the author of the claim language, his decision to narrow his claims through amendment may be presumed to be a general disclaimer of the territory between the original claim and the amended claim. Exhibit Supply, supra, at 136—137. However, in cases in which the amendment cannot reasonably be viewed as surrendering a particular equivalent–e.g., where the equivalent was unforeseeable at the time of the application or the rationale underlying the amendment bears but a tangential relation to the equivalent–the patentee can rebut the presumption that prosecution history estoppel bars a finding of equivalence by showing that at the time of the amendment one skilled in the art could not reasonably be expected to have drafted a claim that would have literally encompassed the alleged equivalent. Pp. 12-16.

(e) Whether Festo has rebutted the presumptions that estoppel applies and that the equivalents at issue have been surrendered should be determined in the first instance by further proceedings below. Pp. 16-17. Vacted and remanded.

Trade Mark Cases

(U.K & EUROPEAN UNION CASES)

Arsenal Football Club Plc v Reed (No.2)
(CA) Court of Appeal

21 May 2003

[2003] R.P.C. 39

May 22, 2003

WHETHER A TRADE MARK CAN BE USED BY ANOTHER AS A SIGN OF AFFILIATION WITHOUT INFRINGEMENT

Abstract: A, a football club, appealed against a decision ([2002] EWHC 2695, [2003] 1 All E.R. 137) giving judgment in favour of the defendant, R, and holding that the court was not bound by an ECJ ruling ([2003] All E.R. (EC) 1) following a reference on specific questions regarding trade mark infringement. R had run a wholesale and retail football merchandise business and had sold products bearing signs identical to the registered trade marks of A. A had brought infringement proceedings under the Trade Marks Act 1994 s. 10 and further claimed passing off. R's defence was that the signs had not been used as trade marks indicating trade origin, but were merely a sign of affiliation to A's football club. Questions were referred to the ECJ as to whether A should be able to prevent the use as signs of affiliation. The ECJ ruled that, in the circumstances, A would be entitled to prevent the use of signs identical to its trade marks on goods for which the mark was registered. The judge below held that the ECJ had exceeded its jurisdiction by making findings of fact that were inconsistent with those reached at trial. The judge felt that he was not bound by the ECJ's ruling in favour of A but, applying the ECJ's guidance to the trial findings of fact, ruled for R.

Summary: Held, allowing the appeal, that the ECJ had not disregarded the conclusions of fact made at trial and, therefore, the judge should have followed that ruling and decided the case in A's favour. The questions referred by the judge to the ECJ were based on the view that the issue of infringement would depend upon whether the use complained about was trade mark use, in the sense that the use indicated the origin of the goods. The ECJ concluded that that was not the relevant consideration. The ECJ held that registration of a trade mark gave the proprietor a property right and the relevant consideration was whether the use complained of was likely to damage that property right or was likely to affect or jeopardise the guarantee of origin that constituted the essential function of the mark. That did not depend on whether the use complained of was trade mark use. The ECJ's factual conclusions had stemmed from this reasoning and the finding that R's use of identical signs would affect the essential function of the registered marks as a guarantee of origin was inevitable in the circumstances. Furthermore, the judge below had erred in finding that R's use of the sign was merely a mark of allegiance as a substantial number of customers would have considered the mark representative of trade origin.

Barclays Bank Plc v RBS Advanta
(Ch D) Chancery Division

26 January 1996

[1996] R.P.C. 307 <u>Comparative advertising</u>

Abstract: BB applied for an interlocutory injunction restraining RBS from referring to the registered trade mark "Barclaycard" in literature promoting their own Visa credit card. BB claimed that in its promotional literature RBS referred to services provided by competitors, in particular " Barclaycard Visa ", and as a result would gain an unfair market advantage. RBS argued that even though BB only had to show an arguable case, American Cyanamid Co v Ethicon Ltd [1975] A.C. 396 considered, they did not have such a case, and in the alternative that if such a case did exist, it was too weak to justify relief being granted.

Summary: Held, refusing the application, that although the Trade Marks Act 1994 s. 10(6) had been badly drafted, its objective was to allow comparative advertising where use of the competitor's mark was judged to be honest by the members of a reasonable audience. Honesty was to be measured by what the general public would normally expect from an advertisement for the goods or services in question. The advertising literature communicated only RBS's belief that its card offered customers a better deal than others on the market. The court agreed with RBS that BB had slender prospects of winning and therefore interlocutory relief should not be granted.

British Sugar Plc v James Robertson & Sons Ltd (Ch D) Chancery Division

7 February 1996

[1996] R.P.C. 281 <u>Trade mark infringement</u>

In 1992 BS registered "Treat" as a trade mark under the specification "Dessert sauces and syrups". The mark was used on "Silver Spoon Treat", a syrup to be poured over desserts. In 1995 JR produced a spread known as "Robertson's Toffee Treat". BS brought an action for trade mark infringement against JR, alleging that JR's product was likely to cause confusion on the part of the public.

Summary: Held, giving judgment for JR, that (1) there was no likelihood of confusion: the products had different purposes and were presented differently; furthermore, they were sold with their house trade marks prominently displayed; (2) for the purpose of trade, JR's product was not a dessert sauce and therefore fell outside the specification used by BS; (3) for the purpose of the infringement provisions of the Trade Marks Act 1994 s. 10, the use of a "sign" did not have to involve use as a trade mark; (4) under s. 10 a comparison would have to be made between the use of the plaintiff's mark in a normal and fair manner in connection with goods for which it was registered and the way the defendant used its mark, no account being taken of added matter or circumstances; (5) for the purpose of s. 10(2)(a), the question of similarity between goods was independent of the question whether there existed a likelihood of confusion. When considering whether similarity existed, it would be appropriate to take into account the use of the goods, who used them, their physical nature, the trade channels through which they reached the market, where they were likely to be found and the extent to which they were competitive. In the instant case, there was no similarity between the parties' products: they were not in direct competition; they would be found in different places in supermarkets; their physical nature differed; they were also viewed as falling within different sectors for the purpose of market research; (6) use of a sign as a trade mark could not amount to descriptive use under s. 11(2). "Robertson's Toffee Treat " was highly descriptive and those words were not used as a trademark.

Accordingly, JR would have been entitled to rely on the defence provided by s. 11(2), and (7) as to the validity of BS's mark, the evidence fell far short of showing that it had been distinctive at the date of registration: the public had not regarded it as a reliable badge of trade origin; what was more, use had been confined to use as an ice cream topping and did not therefore include the full range of goods covered by the registration. As at the date of the hearing, while the word "Treat" had acquired a modest degree of distinctiveness, it had certainly not acquired universal acceptance as a trademark for dessert toppings. The distinctive character of a mark was a question of degree. A common, laudatory word such as "treat" was, in the absence of use and recognition as a trade mark, devoid of distinctive character. The evidence relied on by BS failed to show that its mark had acquired a distinctive character. Accordingly, the mark fell within s. 3(1)(b), being one that was devoid of any distinctive character. It was also caught by s. 3(1)(c), consisting as it did of a sign designed to designate the kind, quality and intended purpose of the product, and probably by s. 3(1)(d), being a sign which had become customary in the current language.

Cadbury Schweppes Pty Ltd v Pub Squash Co Pty Ltd (PC (Aus)) Privy Council (Australia)

13 October 1980

[1981] R.P.C. 429

Passing off

Summary: A plaintiff may acquire an intangible property right in his product by virtue of the product deriving a distinctive character recognised by the market from its advertising. P Co sold "Solo" in Australia. "Solo" was a soft drink, packaged to look like beer, i.e. in a can bearing a medallion. P Co ran an advertising campaign to associate the drink with manliness and adventure. D Co launched a soft drink called "Pub Squash," also in beer-style cans with medallions.D Co also ran an advertising campaign emphasising manliness and adventure. P Co took proceedings against D Co for passing-off. The

Supreme Court of New South Wales dismissed the claim. On appeal to the Privy Council, held, dismissing the appeal, that the tort of passing-off could encompass slogans or visual images associated with a product in an advertising campaign, and a plaintiff could acquire an intangible property right by virtue of the product deriving a distinctive character recognised by the market from the advertising. However, on the facts, the judge was entitled to find that the advertising had not become a distinguishing feature of the product. Although D Co had deliberately taken advantage of P Co's advertising campaign, the public had not been misled, and the judge was entitled to find as he had (Hornsby Building Information Centre Pty. v. Sydney Building Information Centre Pty. (1978) 18 A.L.R. 639 and Erven Warnink BV v J Townend & Sons (Hull) [1979] A.C. 731 applied).

CODAS Trade Mark (TMR) Trade Marks Registry

6 October 2000

Where Reported

[2001] R.P.C. 14

Registrability of trade marks

CDS applied to register the mark CODAS in Classes 9, 37, 41 and 42 in respect of computers, software and related services for use in the oil distribution industry, having used the mark continuously since 1975 for computer applications in that industry. C opposed the application on the basis of its existing trade mark registrations for CODA and similar marks, which it had used continuously in the UK since 1981 for various financial, accounting and sales computer software and associated design, consultancy and training purposes. Many of C's customers were in the oil industry, however, there were no instances of confusion between the respective marks. CDS therefore claimed that the application should be allowed on the basis of honest concurrent use under the Trade Marks Act 1994 s. 7.

Summary: Held, allowing the application subject to restriction in respect of Class 9, that (1) where an application had been opposed under s. 5(2)(b) by the owner of an earlier trade mark s. 7(2) did not make refusal mandatory. If an opposition was filed, then it had to be determined whether the grounds for refusal were made out. In relation to s. 5(2), the fact that there had been actual concurrent use would be relevant in determining whether there was a likelihood of confusion. Honest concurrent use was therefore not a defence capable of saving an application, but it was one of the relevant factors to be taken into account when deciding the likelihood of confusion; (2) C's marks for CODA were nearly identical to CODAS, particularly when used in the plural. Similarly, C's marks for CODA-IAS and CODA OAS had a high degree of similarity; (3) limiting the scope of the application to the oil distribution industry would have no effect given the range of goods and services that could be used in an industry. The restriction did not affect the similarity between CDS's goods and services and those of C, and (4) CDS had only used the CODAS mark for certain goods in Class 9 and there was a likelihood of confusion if the application proceeded as applied for. However, since no instances of confusion had arisen to date, limiting the application to the goods for which there had been concurrent use would obviate this likelihood.

Important factors for determining confusion held by the court

the likelihood of confusion must be appreciated globally, taking account of all relevant factors;

the matter must be judged through the eyes of the average consumer, of the goods/services in question, who is deemed to be reasonably well informed and reasonably circumspect and observant - but who rarely has the chance to make direct comparisons between marks and must instead rely upon the imperfect picture of them he has kept in his mind;

- the average consumer normally perceives a mark as a whole and does not proceed to analyse its various details;

- the visual, aural and conceptual similarities of the marks must therefore be assessed by reference to the overall impressions created by the marks bearing in mind their distinctive and dominant components;

- a lesser degree of similarity between the marks may be offset by a greater degree of similarity between the goods, and vice versa;

- there is a greater likelihood of confusion where the earlier trade mark has a highly distinctive character, either per se or because of the use that has been made of it.

JERYL LYNN Trade Mark Also known as: Merck & Co Inc v SmithKline Beecham Plc (Ch D) Chancery Division

4 December 1998

Where Reported

Registrability of trade mark

[2000] E.T.M.R. 75

[1999] F.S.R. 491

Abstract: SKB applied under the Trade Marks Act 1994 s. 47(1) for a declaration that M's registered trade mark, JERYL LYNN, breached s. 3 of the Act and was therefore invalid. M's research institute had isolated mumps viruses from a throat wash taken from the director's daughter in 1963, and the strain used in its research had been named in her honour. Following 19 cycles of cell culture, the "Jeryl Lynn" strain, termed a "level 19 live virus", was used for production of M's mumps vaccines. JERYL LYNN had been used in connection with the vaccines for many years when, in 1995, M successfully applied for its registration as a Class 5 trade mark. SKB had developed its own mumps vaccine, deriving its attenuated strain from the live virus contained in M's vaccines, but M refused to grant SKB permission to describe its strain as a "purified derivative of the Jeryl Lynn strain". SKB's challenge to the validity of the mark raised the issue of whether the mark, when used in connection with mumps virus or vaccines, was a trade mark at all: that is, a sign indicating the origin of the products, or merely a descriptive or technical name for a particular strain or family of strains of the virus for the purposes of s. 3(1)(a).

Summary: Held, making the declaration sought, that where an application for registration had been preceded by many years of use, resolution of the central factual issue might be indicated by the application of four criteria: (1) the product to which the mark had been applied. M's evidence was that the mark had been used to indicate the origin of the active ingredient in its vaccines, but had accepted that its use of the word "ingredient" had been synonymous with "virus"; (2) whether it had been used exclusively in connection with that product. M's contention that the mark had only been used in connection with the level 19 virus was unsupported by the evidence, and it had not been denied that the name "Jeryl Lynn" had been applied to the isolated virus as well as more than one strain tested during research; (3) whether it had been used as a designation of origin. References to the vaccines had usually been accompanied by statements that the product names were trade marks belonging to M, and M's marketing had never implied that "Jeryl Lynn" was intended to identify the source of the products, and (4) whether the mark had come to be recognised as a designation of origin. M's case was that it was possible for a name to be used both as a technical name for a virus and as a trade name, but a name overwhelmingly fulfilling the former function would not satisfy the requirement for distinctiveness and could not be registered.

Dualit Ltd's Trade Mark Application (No.2023846) (Ch D) Chancery Division

5 July 1999

REGISTRABILITY OF SHAPE MARKS

[1999] R.P.C. 890

Abstract: D, a manufacturer of toasters and proprietor of the word trade mark "Dualit", appealed against the refusal of the Registrar to allow D to register a mark consisting of the shape of two models of toaster without any word mark ([1999] R.P.C. 304, [1999] 6 C.L. 402). At issue was whether the shape of D's toasters was sufficiently distinctive to distinguish their products from those of other undertakings for the purposes of the Trade Marks Act 1994 s. 3(1)(b).

Summary: Held, dismissing the appeal, that for a product's shape to be registrable as a trade mark it must go beyond that necessary to achieve a technical result. There must be some addition of trade mark significance to that shape if it was not to be excluded from registration under s. 3(2)(b), Philips Electronics NV v Remington Consumer Products Ltd (No.1) [1999] E.T.M.R. 816 applied. Since the shape of the toasters was not inherently distinctive, D was required to show that its shape had acquired a distinctive character through use and the appropriate context in which to determine that issue was that of competing traders in the marketplace, Procter & Gamble Ltd v Registrar of Trade Marks [1999] E.T.M.R. 375 applied. D had conducted a retail survey in an attempt to show that customers identified the goods as originating from a particular undertaking because of the feature in respect of which registration was sought, but the flawed methodology meant that the results, which were in any event of little assistance to D, had to be discounted. The hearing officer had been wrong to define a category of goods by reference to style, rather than function or mode of operation, for the purposes of s. 3(1)(a) and an objection under that paragraph could not be upheld. However, an objection could be upheld under s. 3(1)(b), on the ground that the models had not acquired a distinctive character through use, and the shapes were not registrable on that basis.

Lloyd Schuhfabrik Meyer & Co GmbH v Klijsen Handel BV (C342/97) (ECJ) European Court of Justice

22 June 1999

PHONETIC SIMILARITY, CONSUMER CONFUSION

[2000] F.S.R. 77

Abstract: L, a manufacturer of shoes using the brand name "Lloyd", sought, inter alia, an order restraining K from using the name "Loint's" for shoes and footwear on the basis that the two names were likely to be confused due to their aural similarity and use for identical products. L relied on the particularly distinctive character of the "Lloyd" mark arising from its high recognition, its consistent and extensive use over a long period and the absence of descriptive elements. The German court sought a preliminary ruling from the ECJ on the interpretation of Council Directive 89/104 relating to trade marks Art. 5(1)(b)

Summary: Held, that similar sounding trade marks could give rise to a likelihood of confusion within the meaning of Art. 5(1)(b), and the chance of consumer confusion was greater the more distinctive the first mark was, and the more alike that the goods or services covered by the marks were. An overall consideration of the public's ability to discriminate between the goods or services of a mark's proprietor and those of other undertakings was required in order to establish the distinctiveness of a registered mark. All relevant factors should be taken into account, particularly the intrinsic characteristics of the mark, including whether that mark contained elements which described the goods or services for which it had been registered. However, it was impossible to establish generally the degree of public recognition of the mark, for example by using percentage points, especially when a mark possessed a strong distinctive character.

Procter & Gamble Ltd's Trade Mark Applications (Detergent Bottles) Also known as : Procter & Gamble Ltd v Registrar of Trade Marks (CA) Court of Appeal

29 January 1999

REGISTRATION OF 3-DIMENSIONAL BOTTLE AS TRADE MARK

[1999] R.P.C. 673

Abstract: P&G appealed against the dismissal ((1997) 20(12) I.P.D. 20123) of its appeal against the refusal of the registrar to allow the registration of three dimensional bottles as trade marks for household cleaning products, on the basis that the trade marks were "devoid of any distinctive character" under the Trade Marks Act 1994 s. 3(1)(b). Each bottle had a corrugated effect below

the shoulders, a shape which was held to be typical of such containers, with the labels either not including any legible wording or having ghost wording and faintly depicting where the illustration would appear. The colours used for the bottles were primary colours, which were found to be invariably used on containers for such products. In order to secure protection against lookalike products P&G sought registration under the Act for the "get up" of the products, ie. their characteristic style which could be conferred by elements such as typography, materials and use of colouring. P&G contended that registration could not be refused unless a mark possessed no distinctive character whatsoever and that each of its applications depicted a distinctive get up.

Summary: Held, dismissing the appeal, that s. 3(1)(b) referred to a visible sign, or combination of signs, which could by itself clearly distinguish one trader's products from those of a competitor. Unusual or absurd marks were readily noticeable and were distinctive in that they were capable of performing the essential functions of a trade mark, Philips Electronics NV v Remington Consumer Products Ltd [1998] E.T.M.R. 124 considered. However, if the differences between two products' appearance and packaging were only apparent on close examination and comparison, neither could be said to be distinctive. In the instant case, registration of the bottles had been rightly refused on the basis that, treating their shape, ghosted labels and colours as a combination, they were not distinctive but were merely typical of the get up of household cleaning products. The 1994 Act, which unlike its predecessors provided no definition of "distinctiveness ", was not a consolidating Act but rather was intended to give effect to EC law. Therefore, authorities relating to the Act's antecedents, such as W&G du Cros Ltd's Application, Re (1913) 30 R.P.C. 660, were to be approached with caution.

Koninklijke Philips Electronics NV v Remington Consumer Products Ltd (C299/99) Also known as : Philips Electronics NV v Remington Consumer Products Ltd (C299/99) (ECJ) European Court of Justice

18 June 2002

[2003] R.P.C. 2

WHETHER SHAPE OF PRODUCT ATTRIBUTABLE TO TECHNICAL RESULT IS REGISTRABLE?

A number of questions were referred by the Court of Appeal to the ECJ for a preliminary ruling concerning the interpretation of the Trade Marks Directive 89/104. In 1966 P developed a new type of three headed rotary electric shaver, the design and shape of which it subsequently registered as a trade mark in 1985. In 1995 R began to manufacture and sell in the United Kingdom a shaver with three rotating heads forming an equilateral triangle, similar to the design of P's product. P claimed that R had infringed its trade mark and R counterclaimed for revocation of the mark for lack of distinctness.

Held, giving a preliminary ruling, that (1) there was no category of marks which was not excluded from registration by Art. 3(1)(b), (c), (d) and Art. 3(3) of the Directive which was nonetheless excluded from registration by Art. 3(1)(a) on the ground that such marks were incapable of distinguishing the goods of the proprietor of the mark from those of other undertakings; (2) in order to be capable of distinguishing a product for the purposes of Art. 2, the shape of the product in respect of which the sign was registered did not require any capricious addition, such as an embellishment which had no functional purpose; (3) where the trader had been the only supplier of particular goods to the market, exclusive use of a sign which consisted of the shape of those goods could be sufficient to give the sign a distinctive character for the purposes of Art. 3(3) in circumstances where, as a result of that use, a substantial proportion of the relevant class of persons associated that shape solely with that trader or believed that goods of that shape came from that trader, and (4) Art. 3(1)(e) meant that a sign consisting exclusively of the shape of a product was unregistrable if it was established that the essential functional features of that shape were attributable only to a technical result since the objective behind Art. 3(1)(e) was to prevent trade marks from being used to protect technical solutions which a user was likely to seek in the products of competitors.

Transpay Trade Mark - (TMR) Trade Marks Registry

31 January 2000

TRADE MARK REGISTRATION : RELATIVE GROUNDS FOR REFUSAL

[2001] R.P.C. 10

Abstract: BB applied to register the word TRANSPAY in Classes 16 and 36 for money orders, cheques, cheque books, bankers drafts, plastic cards, banking and financial services in November 1994 and in February 1995 it applied to register another version of the device in the same classes. Both applications were accepted and published. In November 1995, CE filed notice of opposition under the Trade Marks Act 1994 s. 5(2)(b). CE owned two earlier trade marks for TRANSCHEQ in the same classes, but these had expired following non renewal in February 1997 and the question arose as to whether a valid objection could be taken under s. 5(2)(b) in respect of lapsed earlier marks. CE argued that, as the earlier trade marks were on the register when BB made its applications, they were earlier marks in terms of s. 6 and their status was not affected by the subsequent lapse.

Summary: Held, dismissing the opposition and allowing registration, that (1) s. 6 provided that a registered trade mark with an application date that preceded a trade mark application for similar goods or services was a bar to the later application's acceptance. However, this was not absolute and account had to be taken of matters that occurred after the application date and prior to the final decision on registration for the later mark, otherwise unfairness could result. If consideration was restricted to matters that existed at the application date, it would be impossible for part cancellation of goods or services to be taken into account that could allow the later mark to be registered. Further, the effect of cancellation or assignment of a mark could not be considered; (2) the construction of the Act showed that acceptance for registration and actual registration were two separate events. Section 37 dealt with the examination of a registration application and s. 40 made provision for the actual registration and required registration to proceed, unless it had been accepted in error. Therefore, acceptance of an application was not the same as registration, so that a trade mark that otherwise would have been refused, on the basis of a pre-existing mark, could be accepted where information on the earlier mark was unavailable at the application date, and (3) CE's earlier marks no longer existed as registered trade marks under s. 6 so CE could not rely on s. 5(2) as the basis for its opposition in the instant case.

WHIRLPOOL Trade Mark (Sup Ct (Ind)) Supreme Court (India)

30 August 1996

(1997) F.S.R. 905

PASSING OFF, CROSS BORDER REPUTATION

P, a substantial manufacturer of WHIRLPOOL washing machines, sought to restrain D from passing off its goods as P's. P had had relevant trade mark registrations in India for the WHIRLPOOL mark but those lapsed in 1977 due, P alleged, to a misunderstanding with its trade mark agents. P claimed a worldwide reputation and goodwill in the mark WHIRLPOOL as a result of extensive advertising and promotional efforts. D was the proprietor of the registered trade mark WHIRLPOOL in India for washing machines. The mark had been applied for in 1986 and though opposition proceedings had been lodged by P, the trade mark had been registered while the Registry decision was under appeal. D argued that P had no reputation in India and that D's registration of the mark WHIRLPOOL afforded a complete defence to the passing off action. The judge granted the relief sought and D appealed.

Summary: Held, dismissing the appeal, that (1) a foreign trader need not show actual sales or availability of its products in India to establish sufficient goodwill to maintain an action in passing off; it could arise upon proper evidence of trans border reputation, such as from advertisements in publications circulating in India and

television advertising etc, JN Nicholas (Vimto) Ltd v Rose & Thistle (1995) 20 I.P.L.R. 32, Consolidated Foods Corp v Brandon & Co [1965] A.I.R. Bom. 35, Seven-Up Co v OT Ltd (1947) 75 C.L.R. 203, [1947-51] C.L.C. 378, Pioneer Hi-Bred Corn Co v Hy- Line Chicks Pty Ltd [1979] R.P.C. 410, Apple Computer Inc v Apple Leasing and Industries 1991(1) Arb. L.R. 93 and Kamal Trading Co v Gillette (UK) Ltd (1988) 12 I.P.L.R. 135 applied; (2) by the date of commencement of the action, P had acquired a very substantial worldwide reputation in the mark WHIRLPOOL as applied to washing machines. Prima facie, buyers were likely to be deceived or confused as to the origin and source of the goods in question; (3) D's registration of the mark WHIRLPOOL for washing machines afforded no defence under the Trade and Merchandise Marks Act 1958 as s. 27(2) specifically stated that the prior user of a trade mark could maintain an action for passing off; (4) the law of passing off permitted an action against the registered proprietor of a trade mark for inducing and misleading consumers into thinking that its goods were the goods of or connected with the goods of a prior user of the trade mark, Century Traders v Roshan Lal Duggar & Co [1978] A.I.R. Delhi 250, Malhotra v Ropi Industries (1976) Ind. L.R.(1) Delhi 278, General Electric Co (USA) v General Electric Co Ltd [1972] 1 W.L.R. 729 followed, and (5) the judge was right to hold that there would be irreparable damage to P's reputation and goodwill in the mark WHIRLPOOL because D's washing machines were not of the same standard and quality as P's machines.

Yahoo! Inc v Akash Arora (Delhi High Court, India)

9 February 1999

[1999] F.S.R. 931

DOMAIN NAMES, PASSING OFF

Abstract: YI, a well known internet service provider, was the proprietor of 69 trade marks worldwide for the mark YAHOO! and had a pending application in India. YI sought a temporary injunction against AA, restraining it from using the domain name YAHOOINDIA.COM, claiming that AA was passing off its services and goods as those of YI. A domain name, YI submitted, was entitled to equal protection from passing off as that afforded to trade marks. AA contended that (1) there could be no passing off of YI's services because the services rendered by them could not be said to be goods within the meaning of the Trade Mark Merchandise Act (India), which only dealt with goods and not services, and (2) Yahoo was a dictionary word which was not distinctive and since AA had been using a disclaimer there could be no chance of deception and therefore no passing-off.

Held, granting the temporary injunction, that (1) there were several cases where services had been included within the scope of passing off. Accordingly, services rendered had come to be recognised for an action passing off, Reddaway v Banham [1896] A.C. 199, Ellora Industries v Banarsi Dass & Ors [1981] P.T.C. 46 considered; (2) a domain name served the same function as a trade mark and was entitled to equal protection as a trade mark, Cardservice International Inc v McGee 42 U.S.P.Q. 2d 1850 considered; (3) the two marks were identical, save for the word INDIA, and there was every possibility of an Internet user being confused that both domain names came from a common source. This was particularly so since YI itself had used regional names after the word YAHOO; (4) the disclaimer used by AA was of no relevance because, due to the nature of Internet use, AA's appropriation of YI's mark as a domain name and home page address could not be adequately communicated by a disclaimer, and (5) dictionary words could attract distinctiveness, Dongre v Whirlpool Corp [1996] P.T.C. 583 considered.

CASES (U.S.A)
In re Celia Clarke, dba Clarke's OSEWEZ
Trademark Trial and Appeal Board
17 U.S.P.Q.2D (BNA) 1238

September 19, 1990, Decided

WHETHER SCENTS CAN BE REGISTERED AS A TRADEMARK

Applicant, Celia Clarke, doing business as Clarke's OSEWEZ, has appealed from the final refusal of the Trademark Examining Attorney to register applicant's asserted mark for "sewing thread and embroidery yarn." Applicant has described her mark in the "drawing" filed with her application as follows: "The mark is a high impact, fresh, floral fragrance reminiscent of Plumeria blossoms."

Serial No. 758,429, filed October 18, 1988, claiming use since October 6, 1988.

The Examining Attorney has refused registration on the ground that applicant's asserted mark does not function as a trademark because it does not identify or distinguish applicant's goods from those of others. In the initial refusal, the Examining Attorney observed that applicant's fragrance mark is analogous to other forms of product ornamentation in that it is not the type of matter, which consumers would tend to perceive as an indication of origin. The Examining Attorney also refused registration on the basis that applicant's alleged mark was de jure functional, assertedly because of the competitive need for free access to pleasant scents or fragrances. In his appeal brief, the Examining Attorney withdrew the de jure functionality refusal.

In support of her attempt to register this fragrance mark, counsel for applicant submitted a declaration of applicant attesting to the fact that, to the best of her knowledge, no other company has ever offered any scented embroidery yarn or thread; that she has placed advertisements stressing the fact that her company is the source of sweet-scented embroidery products, known in the trade as Russian embroidery or punch embroidery; and that due to the success of her products, applicant is now a major source of yarn and thread and supplies dealers and distributors throughout the United States. Applicant also states that her company has received a great number of favourable and positive responses to her unique product and that, to the best of her knowledge, customers, dealers and distributors throughout the embroidery field recognize applicant as the source of scented embroidery yarn and thread. While maintaining that her fragrance is registrable [*3] as a mark because it is inherently distinctive of yarns and threads, no other manufacturer having sold such goods, applicant nevertheless argues that she has presented sufficient evidence of recognition of her asserted mark. Applicant concludes, brief, 13:

Others are free to adopt any other scent for their yarns and threads, including floral scents such as that of a lily of the valley, a carnation or a rose to give but three examples. Surely people have come [to] distinguish these floral scents from one another, just as they can distinguish the colour pink (for fibreglass insulation) from other warm colours such as red, orange, and yellow. Just as the registration of the colour pink for fibreglass insulation has been held to not present a significant obstacle for competitors wishing to produce fibreglass insulation, so does the applicant's particular fragrance not present a significant obstacle to competitors wishing to offer scented yarns.

Applicant has made of record a complete sealed kit containing scented yarn and thread for making a scented skunk.

Expressing unawareness of any precedent dealing with the registrability of an arbitrary, non-functional scent, the Examining Attorney states that the most closely analogous determinations appear to be those dealing with colours as trademarks. The Examining Attorney concedes that there is no inherent bar to the registrability of an arbitrary, nonfunctional scent or fragrance n3 and that this record discloses that the scent applicant has added to her product is not a natural or inherent feature of the goods and does not provide any utilitarian advantage. The Examining Attorney adds that, presumably, if applicant's scent does function to indicate origin, potential consumers may readily be able to distinguish among the vast array of scents in identifying competing sources of goods.

An even closer analogy might be drawn to sound marks used and registered for services. Cases involving unique packaging also seem relevant.

Section 45 of the Trademark Act, 15 U.S.C. 1127, as amended (eff. Nov. 16, 1989), defines the term "trademark" as follows:

The term "trademark" includes any word, name, symbol, or device, or any combination thereof -

1. used by a person, or

2. which a person has a bona fide intention to use in commerce and applies to register on the principal register established by this Act, to identify and distinguish his or her goods, including a unique product, from those manufactured or sold by others and to indicate the source of the goods, even if that source is unknown.

In support of his argument that applicant's fragrance mark is not of a character usually recognized by potential consumers as an indication of origin, he requests the Board to take judicial notice of the fact that there are pleasant, arbitrary and nonfunctional scents in a wide variety of products, including cosmetics and cleaning products, which have the sole purpose of making the use of those products more pleasant or attractive. Therefore, while applicant is the only source of scented yarn and thread, the Examining Attorney argues that potential consumers are unlikely to regard scent in any product as an indication of exclusive origin in view of their conditioning in the consumer product marketplace. The rarity of usage of fragrance as a feature of applicant's goods weighs against registration, according to the Examining Attorney. Rather, it is much more likely that consumers will regard the scent as a pleasant feature of the goods.

While the Examining Attorney concedes that the asserted fragrance may be registrable upon a convincing showing of trademark function, he maintains that applicant has not specifically promoted the particular scent as an indication of origin. Applicant's advertising makes reference to "Clarke's Distinctive Soft-Scented Yarns," but no reference is made to a specific fragrance. Nor does the advertising make any attempt, according to the Examining Attorney, to draw attention to the scent as an indicator of origin.

Upon careful review of this record, we believe that applicant has demonstrated that its scented fragrance does function as a trademark for her thread and embroidery yarn. Under the circumstances of this case, we see no reason why a fragrance is not capable of serving as a trademark to identify and distinguish a certain type of product. It is clear from the record that applicant is the only person who has marketed yarns and threads with a fragrance. n4 That is to say, fragrance is not an inherent attribute or natural characteristic of applicant's goods but is rather a feature supplied by applicant. Moreover, applicant has emphasized this characteristic of her goods in advertising, promoting the scented feature of her goods. Applicant has demonstrated that customers, dealers and distributors of her scented yarns and threads have come to recognize applicant as the source of these goods. In view of the unique nature of applicant's product, we do not believe that the failure of applicant to indicate in her promotional materials the specific scent or fragrance of her yarn (admittedly difficult to describe except in the manner that applicant has done so) is significant. In her advertisements and at craft fairs, applicant has promoted her products as having a scented nature. We believe that applicant has presented a prima facie case of distinctiveness of her fragrance mark. Compare In re Star Pharmaceuticals, Inc., 225 USPQ 209 (TTAB 1985) (where applicant failed to demonstrate that the features (colours) sought to be registered had been promoted as a source indicator).

It should be noted that we are not here talking about the registrability of scents or fragrances of products, which are noted for those features, such as perfumes, colognes or scented household products. Nor is this a case involving the question of descriptiveness of a term, which identifies a particular fragrance of a product. In such cases it has been held that a term is unregistrable under Section 2(e)(1) of the Act if it merely describes an odour or other significant feature of the product. See In re Gyulay, 820 F.2d 1216, 3 USPQ2d 1009 (Fed. Cir. 1987) (APPLE PIE held merely descriptive since the term described the scent released by potpourri simmered in water).

We note that the Trademark Review Commission of the United States Trademark Association, in its review of the Trademark Act of 1946,

Determined that the terms "symbol, or device" should not be deleted or narrowed to preclude registration of such things as a colour, shape, smell, sound, or configuration which functions as a mark.

The United States Trademark Association Trademark Review Commission Report and Recommendations to USTA President and Board of Directors, 77 TMR 375, 421 (Sept. -Oct. 1987). See also Moon-Ki Chai, "Protection of Fragrances under the Post-Sale Confusion Doctrine," 80 TMR 368, 371-72 (July-Aug. 1990).

Decision: The refusal of registration is reversed.

MOSELEY et al., dba VICTOR'S LITTLE SECRET v. V SECRET CATALOGUE, INC., et al. (US SUPREME COURT), 123 S.Ct. 1115 (2003)

Decided March 4, 2003

TRADE MARK DILUTION

CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SIXTH CIRCUIT

An army colonel sent a copy of an advertisement for petitioners' retail store, "Victor's Secret," to respondents, affiliated corporations that own the VICTORIA'S SECRET trademarks, because he saw it as an attempt to use a reputable trademark to promote unwholesome, tawdry merchandise. Respondents asked petitioners to discontinue using the name, but petitioners responded by changing the store's name to "Victor's Little Secret." Respondents then filed suit, alleging, inter alia, "the dilution of famous marks" under the Federal Trademark Dilution Act (FTDA). This 1995 amendment to the Trademark Act of 1946 describes the factors that determine whether a mark is "distinctive and famous," 15 U.S.C. § 1125(c)(1), and defines "dilution" as "the lessening of the capacity of a famous mark to identify and distinguish goods or services," §1127.

To support their claims that petitioners' conduct was likely to "blur and erode" their trademark's distinctiveness and "tarnish" its reputation, respondents presented an affidavit from a marketing expert who explained the value of respondents' mark but expressed no opinion concerning the impact of petitioners' use of "Victor's Little Secret" on that value. The District Court granted respondents summary judgment on the FTDA claim, and the Sixth Circuit affirmed, finding that respondents' mark was "distinctive" and that the evidence established "dilution" even though no actual harm had been proved. It also rejected the Fourth Circuit's conclusion that the FTDA "requires proof that (1) a defendant has [used] a junior mark sufficiently similar to the famous mark to evoke in … consumers a mental association of the two that (2) has caused (3) actual economic harm to the famous mark's economic value by lessening its former selling power as an advertising agent for its goods or services," Ringling-Bros.-Barnum & Bailey Combined Shows, Inc., v. Utah Div. of Travel Development, 170 F.3d 449, 461.

Held: 1. The FTDA requires proof of actual dilution. Pp. 9-16. Unlike traditional infringement law, the prohibitions against trademark dilution are not the product of common-law development, and are not motivated by an interest in protecting consumers. The approximately 25 state trademark dilution laws predating the FTDA refer both to injury to business reputation (tarnishment) and to dilution of the distinctive quality of a trademark or trade name (blurring). The FTDA's legislative history mentions that the statute's purpose is to protect famous trademarks from subsequent uses that blur the mark's distinctiveness or tarnish or disparage it, even absent a likelihood of confusion. Pp. 9-13.

(b) Respondents' mark is unquestionably valuable, and petitioners have not challenged the conclusion that it is "famous." Nor do they contend that protection is confined to identical uses of famous marks or that the statute should be construed more narrowly in a case such as this. They do contend, however, that the statute requires proof of actual harm, rather than mere "likelihood" of harm. The contrast between the state statutes and the federal statute sheds light on this precise question. The former repeatedly refer to a "likelihood" of harm, rather than a completed harm, but the FTDA provides relief if another's commercial use of a mark or trade name "causes dilution of the [mark's] distinctive quality," §1125(c)(1) (emphasis added). Thus, it unambiguously requires an actual dilution showing. This conclusion is confirmed by the FTDA's "dilution" definition itself, §1127. That does not mean that the consequences of dilution, such as an actual loss of sales or profits, must also be proved. This Court disagrees with the Fourth Circuit's Ringling Bros. decision to the extent it suggests otherwise, but agrees with that court's conclusion that, at least where the marks at issue are not identical, the mere fact that consumers mentally associate the junior user's mark with a famous mark is not sufficient to establish actionable dilution. Such association will not necessarily reduce the famous mark's capacity to identify its owner's goods, the FTDA's dilution requirement. Pp. 13-15.

2. The evidence in this case is insufficient to support summary judgment on the dilution count. There is a complete absence of evidence of any lessening of the VICTORIA'S SECRET mark's capacity to identify and distinguish goods or services sold in Victoria's Secret stores or advertised in its catalogs. The officer who saw the ad directed his offense entirely at petitioners, not respondents. And respondents' expert said nothing about the impact of petitioners' name on the strength of respondents' mark. Any difficulties of proof that may be entailed in demonstrating actual dilution are not an acceptable reason for dispensing with proof of an essential element of a statutory violation. Pp. 15-16.

259 F.3d 464, reversed and remanded.

TRAFFIX DEVICES, INC. v. MARKETING DISPLAYS, INC.
(US Supreme Court)
532 U.S. 23 (2001)
Certiorari to the united states court of appeals for the sixth circuit

Decided March 20, 2001

Whether functional trade dress is protectable?

Respondent, Marketing Displays, Inc. (MDI), holds now-expired utility patents for a "dual-spring design" mechanism that keeps temporary road and other outdoor signs upright in adverse wind conditions. MDI claims that its sign stands were recognizable to buyers and users because the patented design was visible near the sign stand's base. After the patents expired and petitioner TrafFix Devices, Inc., began marketing sign stands with a dual-spring mechanism copied from MDI's design, MDI brought suit under the Trademark Act of 1964 for, inter alia, trade dress infringement. The District Court granted TrafFix's motion for summary judgment, holding that no reasonable trier of fact could determine that MDI had established secondary meaning in its alleged trade dress, i.e., consumers did not associate the dual-spring design's look with MDI; and, as an independent reason, that there could be no trade dress protection for the design because it was functional.

The Sixth Circuit reversed. Among other things, it suggested that the District Court committed legal error by looking only to the dual-spring design when evaluating MDI's trade dress because a competitor had to find some way to hide the design or otherwise set it apart from MDI's; explained, relying on Qualitex Co. v. Jacobson Products Co., 514 U. S. 159, 165, that exclusive use of a feature must put competitors at a significant non-reputation-related disadvantage before trade dress protection is denied on functionality grounds; and noted a split among the Circuits on the issue whether an expired utility patent forecloses the possibility of trade dress protection in the product's design.

Held: Because MDI's dual-spring design is a functional feature for which there is no trade dress protection, MDI's claim is barred. Pp. 4-11.

(a) Trade dress can be protected under federal law, but the person asserting such protection in an infringement action must prove that the matter sought to be protected is not functional, 15 U. S. C. §1125(a)(3). Trade dress protection must subsist with the recognition that in many instances there is no prohibition against copying goods and products. An expired utility patent has vital significance in resolving a trade dress claim, for a utility patent is strong evidence that the features therein claimed are functional. The central advance claimed in the expired utility patents here is the dual-spring design, which is an essential feature of the trade dress MDI now seeks to protect. However, MDI did not, and cannot, carry the burden of overcoming the strong evidentiary inference of functionality based on the disclosure of the dual-spring design in the claims of the expired patents. The springs are necessary to the device's operation, and they would have been covered by the claims of the expired patents even though they look different from the embodiment revealed in those patents, see Sarkisian v. Winn-Proof Corp., 697 F. 2d 1313. The rationale for the rule that the disclosure of a feature in a utility patent's claims constitutes strong evidence of functionality is well illustrated in this case. The design serves the important purpose of keeping the sign upright in heavy wind conditions, and statements in the expired patent applications indicate that it does so in a unique and useful manner and at a cost advantage over alternative designs. Pp. 4-8.

(b) In reversing the summary judgment against MDI, the Sixth Circuit gave insufficient weight to the importance of the expired utility patents, and their evidentiary significance, in establishing the device's functionality. The error was likely caused by its misinterpretation of trade dress principles in other respects. " `In general terms a product feature is functional,' and cannot serve as a trademark, `if it is essential to the use or purpose of the article or if it affects the cost or quality of the article.' " Qualitex, supra, at 165 (quoting Inwood Laboratories, Inc. v. Ives Laboratories, Inc., 456 U. S. 844, 850, n. 10). This Court has expanded on that meaning, observing that a functional feature is one "the exclusive use of [which] would put competitors at a significant non-reputation-related disadvantage," Qualitex, supra, at 165, but that language does not mean that competitive necessity is a necessary test for functionality. Where the design is functional under the Inwood formulation there is no need to proceed further to consider competitive necessity. This Court has allowed trade dress protection to inherently distinctive product features on the assumption that they were not functional. Two Pesos, Inc. v. Taco Cabana, Inc., 505 U. S. 763, 774. Here, however, beyond serving the purpose of informing consumers that the sign stands are made by MDI, the design provides a unique and useful mechanism to resist the wind's force. Functionality having been established, whether the design has acquired secondary meaning need not be considered. Nor is it necessary to speculate about other design possibilities. Finally, this Court need not resolve here the question whether the Patent Clause of the Constitution, of its own force, prohibits the holder of an expired utility patent from claiming trade dress protection. Pp. 8-11.

Reversed and remanded.

WAL-MART STORES, INC. v. SAMARA BROTHERS, INC.
529 U.S. 205 (2000)
(US SUPREME COURT)
CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT

Decided March 22, 2000

INFRINGEMENT OF TRADE DRESS

Respondent Samara Brothers, Inc., designs and manufactures a line of children's clothing. Petitioner Wal-Mart Stores, Inc., contracted with a supplier to manufacture outfits based on photographs of Samara garments. After discovering that Wal-Mart and other retailers were selling the so-called knockoffs, Samara brought this action for, *inter alia*, infringement of unregistered trade dress under §43(a) of the Trademark Act of 1946 (Lanham Act). The jury found for Samara. Wal-Mart then renewed a motion for judgment as a matter of law, claiming that there was insufficient evidence to support a conclusion that Samara's clothing designs could be legally protected as distinctive trade dress for purposes of §43(a). The District Court denied the motion and awarded Samara relief. The Second Circuit affirmed the denial of the motion.

Held: In a §43(a) action for infringement of unregistered trade dress, a product's design is distinctive, and therefore protectable, only upon a showing of secondary meaning. Pp. 3-10.

In addition to protecting registered trademarks, the Lanham Act, in §43(a), gives a producer a cause of action for the use by any person of "any … symbo[l] or device … likely to cause confusion … as to the origin … of his or her goods." The breadth of the confusion-producing elements actionable under §43(a) has been held to embrace not just word marks and symbol marks, but also "trade dress"–a category that originally included only the packaging, or "dressing," of a product, but in recent years has been expanded by many courts of appeals to encompass the product's design. These courts have correctly assumed that trade dress constitutes a "symbol" or "device" for Lanham Act purposes. Although §43(a) does not explicitly require a producer to show that its trade dress is distinctive, courts have universally imposed that requirement, since without distinctiveness the trade dress would not "cause confusion … as to … origin," as §43(a) requires. In evaluating distinctiveness, courts have differentiated between marks that are inherently distinctive–*i.e.*, marks whose intrinsic nature serves to identify their particular source–and marks that have acquired distinctiveness through secondary meaning–*i.e.*, marks whose primary significance, in the minds of the public, is to identify the product's source rather than the product itself. This Court has held, however, that applications of at least one category of mark–color–can *never* be inherently distinctive, although they can be protected upon a showing of secondary meaning. *Qualitex Co.* v. *Jacobson Products Co.,* 514 U.S. 159, 162-163. Pp. 3-6.

Design, like colour, is not inherently distinctive. The attribution of inherent distinctiveness to certain categories of word marks and product packaging derives from the fact that the very purpose of attaching a particular word to a product, or encasing it in a distinctive package, is most often to identify the product's source. Where it is not reasonable to assume consumer predisposition to take an affixed word or packaging as indication of source, inherent distinctiveness will not be found. With product design, as with color, consumers are aware of the reality that, almost invariably, that feature is intended not to identify the source, but to render the product itself more useful or more appealing. Pp. 6—9.

Two Pesos, Inc. v. *Taco Cabana, Inc.,* 505 U.S. 763, does not foreclose the Court's conclusion, since the trade dress there at issue was restaurant décor, which does not constitute product *design,* but rather product packaging or else some *tertium quid* that is akin to product packaging and has no bearing on the present case. While distinguishing *Two Pesos* might force courts to draw difficult lines between product-design and product-packaging trade dress, the frequency and difficulty of having to distinguish between the two will be much less than the frequency and difficulty of having to decide when a product design is inherently distinctive. To the extent there are close cases, courts should err on the side of caution and classify ambiguous trade dress as product design, thereby requiring secondary meaning. Pp. 9-10.

QUALITEX CO. v. JACOBSON PRODUCTS CO., INC.

514 U.S. 159 (1995). U.S. Supreme Court

CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

Decided March 28, 1995

Petitioner Qualitex Company has for years colored the dry cleaning press pads it manufactures with a special shade of green gold. After respondent Jacobson Products (a Qualitex rival) began to use a similar shade on its own press pads, Qualitex registered its color as a trademark and added a trademark infringement count to the suit it had previously filed challenging Jacobson's use of the green gold color. Qualitex won in the District Court, but the Ninth Circuit set aside the judgment on the infringement claim because, in its view, the Lanham Trademark Act of 1946 does not permit registration of color alone as a trademark.

Held: The Lanham Act permits the registration of a trademark that consists, purely and simply, of a color. Pp. 2-15.

That color alone can meet the basic legal requirements for use as a trademark is demonstrated both by the language of the Act, which describes the universe of things that can qualify as a trademark in the broadest of terms, 15 U.S.C. § 1127 and by the underlying principles of trademark law, including the requirements that the mark "identify and distinguish [the seller's] goods . . . from those manufactured or sold by others and to indicate [their] source," *ibid.,* and that it not be "functional," see, *e.g., Inwood Laboratories, Inc.* v. *Ives Laboratories, Inc.,* 456 U.S. 844, 850, n. 10. The District Court's findings (accepted by the Ninth Circuit and here undisputed) show Qualitex's green gold color has met these requirements. It acts as a symbol. Because customers identify the color as Qualitex's, it has developed secondary meaning, see, *e.g., id.,* at 851, n. 11, and thereby identifies the press pads' source. And, the color serves no other function. (Although it is important to use *some* color on press pads to avoid noticeable stains, the court found no competitive need in the industry for the green gold color, since other colors are equally usable.) Accordingly, unless there is some special reason that convincingly militates against the use of color alone as a trademark, trademark law protects Qualitex's use of its green gold color. Pp. 2-7.

(b) Jacobson's various special reasons why the law should forbid the use of color alone as a trademark—that a contrary holding (1) will produce uncertainty and unresolvable court disputes about what shades of a color a competitor may lawfully use; (2) is unworkable in light of the limited supply of colors that will soon be depleted by competitors; (3) is contradicted by many older cases, including decisions of this Court interpreting pre-Lanham Act trademark law; and (4) is unnecessary because firms already may use color as part of a trademark and may rely on "trade dress" protection—are unpersuasive. Pp. 7-15.

13 F. 3d 1297, reversed.

C.T.L.R. 2005, 11(2), 40-46

Computer and Telecommunications Law Review 2005

Case Comment

COPYRIGHT INFRINGEMENT ON THE INTERNET : WHO PAYS THE PIPER

Barry Sookman.

The exponential growth of the internet has raised serious issues related to liability for infringement. Who should compensate authors and publishers for the use of their works? What activities constitute infringement? Are internet intermediaries such as ISPs liable for infringement when they provide connectivity to subscribers, when they provide hosting services, or when they use caching technologies? Where does infringement occur? Is the scope of copyright legislation limited to acts of infringement which occur wholly within a country, or does the Act apply to acts which take place partly in a country and partly outside of the country?

Statutory rights conferred by copyright [FN1] legislation do not ordinarily render unlawful anything done outside the domestic forum. The effect of this principle is that, ordinarily, an action may not be brought in a country under that country's law for acts of infringement that take place wholly outside the country, even where the effect of the acts result in adverse effects within the country.

The territorial application of copyright legislation of countries that are members of the Berne Convention, or who are parties to the TRIPs Agreement, to activities that take place in that country is mandated, or at least is strongly influenced by, international comity, having regard to these treaties. [FN2] The territorial limits of copyright legislation to activities that take place in a particular country is consistent with the well established underlying postulate of public international law that generally each state has jurisdiction to make and apply law within its territorial limit. Concomitant to this, countries are hesitant to exercise jurisdiction over matters that may take place in the territory of other states. [FN3]

If intellectual property laws generally apply only to acts that take place within a domestic forum, then which laws will apply to infringement claims where the acts of infringement take place partly in one jurisdiction and partly in another? Issues involving transnational infringements are very likely to occur in the copyright area. For example, a person may transmit a copy of a work from outside Canada into Canada, thus causing the work to be reproduced. Similarly, a person may make available a work on a foreign website to be communicated to persons with access to the internet including persons located in Canada. In such circumstances, will Canadian law apply? Will the law of the state in which the work is transmitted apply? Will the copyright laws of neither state apply because the acts of infringement took place partly in one state and partly in another, or will potentially the laws of the state from which the work is transmitted and from which the work is received apply?

In the SOCAN v Canadian Association of Internet Providers [FN4] case (the "Tariff 22 case"), the Supreme Court of Canada tackled these tricky questions. The appeal to the Supreme Court arose out of a tariff filed by SOCAN known as Tariff 22. This tariff was filed in respect of the following licence:

For a licence to communicate to the public by telecommunication, in Canada, musical works forming part of SOCAN's repertoire, by a telecommunications service to subscribers by means of one or more computer(s) or other device that is connected to a telecommunications network where the transmission of those works can be accessed by each subscriber independently of any other person having access to the service ...".

SOCAN's intention in filing the tariff was to collect fees:

"by the entities that provide end users with access to the telecommunication networks, provided, however, that if some or all access providers are determined not to be liable or otherwise do not pay the approved fees, then the tariff should provide for payment of the fees by other appropriate participants in the communication chain". [FN5]

SOCAN's intent, in other words, was to collect royalties from internet intermediaries rather than from content posters or publishers of content, unless internet intermediaries were found not to be liable for infringement. [FN6]

***41** Findings of the Copyright Board

The Copyright Board cannot target persons who are not users of copyright. For this reason and because Tariff 22 raised novel issues, the Board ordered that the proceedings be broken down into two phases. Phase I would determine which actions trigger liability under the Act and which do not. The issues put before the Board were the following:

1. What do "communication", telecommunication", "public" and "musical work" mean in the context of internet transmissions?
2. When does a communication to the public occur on the internet?
3. Who communicates on the internet? In particular, who can benefit from para.2.4(1)(b) of the Act?
4. When does the act of authorising a communication on the internet occur?
5. When does a communication on the internet occur in Canada?

THE BOARD ANSWERED THESE QUESTIONS AS FOLLOWS:

1. A musical work is not communicated when it is made available on a server.
2. A musical work is communicated by telecommunication when a server containing the work responds to a request and packets are transmitted over the internet for the purpose of allowing the recipient to see or hear the work.
3. The public or private character of a communication over the internet can be determined according to established legal and jurisprudential principles.
4. A communication need not be instantaneous or simultaneous to be a communication to the public.
5. By making a work available, a person authorises its communication.
6. The person who made a work available communicates it when it is transmitted from any server (host, cache, mirror).
7. Persons who can avail themselves of para.2.4(1)(b) of the Act with respect to a given communication of a work do not communicate the work. Generally speaking, this includes all entities acting as internet intermediaries such as the ISP of the person who makes the work available, persons whose servers acts as a cache or mirror, the recipient's ISP and those who operate routers used in the transmission.
8. An entity cannot claim the benefit of para.2.4(1)(b) with respect to a given communication of a work if the relationships it entertains with the person who made the work available are such that it can be said to act in concert with that person or if it does not confine itself to the role of an internet intermediary.
9. The person that creates an embedded hyperlink to a work authorises its communication. The person that merely supplies a link which must be activated by the user does not.
10. Communications occur at the site of the server from which the work is transmitted, without regard to the origin of the request or the location of the original website. Therefore, to occur in Canada, a communication must originate from a server located in Canada on which content has been posted.
11. The communication triggered by an embedded hyperlink occurs at the site to which the link leads.
12. The issue of whether an entity that provides content outside Canada with the intention to communicate it specifically to recipients in Canada is communicating it in Canada remains open.

FEDERAL COURT OF APPEAL RULING

SOCAN sought judicial review of the findings of the Copyright Board. The issues in the review were the following:

1. When material is transmitted on the internet, do the operator of the server on which it is stored, and the entity supplying the ultimate recipient with access to the internet, only provide "the means of telecommunication necessary for another person to so communicate the work" within the meaning of para.2.4(1)(b) of the Copyright Act? [FN7]

2. When material requested by an internet user in Canada is stored on a server outside Canada, does communication of that material occur only at the location of the server from which it is transmitted?

3. Can internet intermediaries be required to pay a royalty because they "authorise" the communication of music transmitted on the internet? In particular, does the operator of a host server authorise the communication of music that it is storing, or does an internet access provider authorise the communication of the music requested by and transmitted to one of its subscribers?

In considering the scope of the common carrier exemption, the Federal Court of Appeal ruled that three things must be established for an intermediary's activity to fall within para.2.4(1)(b), and thus not to attract liability for infringing copyright by communicating a work to the public by telecommunication. First, the intermediary's activities must amount to the provision of "the means of telecommunication"; secondly, these means must be "necessary" for enabling another person to communicate a work to the public; and thirdly, the activities in question must constitute the intermediary's "only act" with respect to the communication."

Evans J.A., writing for the majority of the Court agreed with the Board that the word "means", is capable of describing a wider range of services and equipment than those provided by traditional common carriers, and that it should not be given the narrow interpretation urged by SOCAN. It held, however, that:

"a person provides only the means of telecommunication necessary for another person to communicate when, without that person's activity, communication in that medium of telecommunication would not be practicable or, in all probability, would not have occurred."

Applying this test, the Court expressed the opinion that the Board erred in law when it held that an internet intermediary who caches material is thereby providing the means necessary for another to communicate it. According to the Court, the fact that a cache enhances the speed of transmission and reduces the cost to the internet access provider did not render the cache a practical necessity for communication.

On the second issue, the Court disagreed with the findings of the Board that for there to be a communication to ***42** the public in Canada, the communication had to originate from a server located in Canada. The court held that a royalty may be made payable in Canada in respect of communications by telecommunication that have a real and substantial connection with Canada.

On the third issue, the Court agreed with the Board that internet intermediaries do not authorise a communication because they don't have the right to control the actions of users.

Issues in Appeal in the Supreme Court

By the time the case reached the Supreme Court of Canada, the issues had been somewhat narrowed. The key questions to be decided in the appeal and cross-appeal were the following:

1. Whether ISPs are liable to pay royalties to SOCAN by reason only that they provide Internet access, use caching facilities, and provide hosting services?
2. Does the common carrier exemption apply to protect ISPs from liability?
3. Does the Copyright Act apply extra-territorially, e.g. is there liability if music is sent and received in Canada, received by Canadians and transmitted from abroad, or transmitted from Canada to receivers abroad?

Interpretation of Common Carrier Exemption

In interpreting the scope of the common carrier exemption, the Court generally agreed with the holdings of the Federal Court of Appeal, except with respect to the issue of the interpretation of the word "necessary" in para.2.4(1)(b). In this respect, the Court agreed with the dissenting views expressed by Sharlow J.A. of the Court of Appeal that the term "necessary" was to be given a broader meaning and is satisfied if "the means are reasonably useful and proper to achieve the benefits of enhanced economy and efficiency". [FN8]

The Court was critical of the test espoused by Evans J.A. of the Federal Court of Appeal that protection is only available "when, without that person's activity, communication in that medium of telecommunication would not be practicable or, in all probability, would not have occurred". According to the Court:

"This is a high eligibility test which could inhibit development of more efficient means of telecommunication. SOCAN and others representing copyright owners would always be able to argue that whatever the advances in the future, a telecommunication could still have been practicable using the old technology, and that one way or the other the telecommunication would 'in all probability' have occurred. In my view, with respect, Evans J.A. has placed the bar too high."

The Court also held that para.2.4(1)(b) is not a loophole but an important element of the balance struck by the statutory copyright scheme. The section, according to the Court:

"finds its roots, perhaps, in the defense of innocent dissemination sometimes available to bookstores, libraries, news vendors, and the like who, generally speaking, have no actual knowledge of an alleged libel, are aware of no circumstances to put them on notice to suspect a libel, and committed no negligence in failing to find out about the libel". [FN9]

The paragraph was enacted by Parliament with the intent of ensuring that liability would not be imposed on intermediaries who supply software and hardware to facilitate use of the internet.

In the sphere of telecommunications, the paragraph was intended to encourage intermediaries to make telecommunications possible and to prevent liability that could chill such expansion. Parliament's intent in this regard is summarised in the following passages from the Court's reasons for decision:

"Parliament has decided that there is a public interest in encouraging intermediaries who make telecommunications possible to expand and improve their operations without the threat of copyright infringement. To impose copyright liability on intermediaries would obviously chill that expansion and development, as the history of caching demonstrates. In the early years of the Internet, as the Board found, its usefulness for the transmission of musical works was limited by 'the relatively high bandwidth required to transmit audio files' [at p. 426].

The velocity of new technical developments in the computer industry, and the rapidly declining cost to the consumer, is legendary. Professor Takach has unearthed the startling statistic that if the automobile industry was able to achieve the same performance-price improvements as has the computer chip industry, a car today would cost under five dollars and would get 250,000 miles to the gallon of gasoline. ... Section 2.4(1)(b) reflects Parliament's priority that this entrepreneurial push is to continue despite any incidental effects on copyright owners.

In the Board's view, the means 'necessary' under s.2.4(1)(b) were means that were content neutral and were necessary to maximize the economy and cost-effectiveness of the Internet 'conduit'. That interpretation, it seems to me, best promotes 'the public interest in the encouragement and dissemination of works of the arts and intellect' (ThÃ©berge, supra, at para. 30) without depriving copyright owners of their legitimate entitlement. ... by enacting s. 2.4(1)(b) of the Copyright Act, Parliament made a policy distinction between those who abuse the Internet to obtain 'cheap music' and those who are part of the infrastructure of the Internet itself. It is clear that Parliament did not want copyright disputes between creators and users to be visited on the heads of the Internet intermediaries, whose continued expansion and development is considered vital to national economic growth."

The Court observed that Parliament did not say that the intermediaries are engaged in communication of copyright content but enjoy an immunity. Instead, s.2.4(1)(b) says that such intermediaries are deemed, for purposes of the Copyright Act, not to communicate the work to the public at all. For the purposes of s.3(10(f) of the Act, internet intermediaries are not "users".

The Court went on to explain that para.2.4(1)(b) shields from liability the activities associated with providing the means for another to communicate by telecommunication. These means, as the Board found:

43 "... are not limited to routers and other hardware. They include all software connection equipment, connectivity services, hosting and other facilities and services without which such communications would not occur."

As a matter of legislative policy established by Parliament, the Act "does not impose liability for infringement on intermediaries who supply software and hardware to facilitate use of the Internet". According to the Court:

"So long as an Internet intermediary does not itself engage in acts that relate to the content of the communication, i.e. whose participation is content neutral, but confines itself to providing 'a conduit' for information communicated by others, then it will fall within s. 2.4(1)(b). To the extent they act as innocent disseminators, they are protected by s. 2.4(1)(b) of the Act."

In this respect, the Court agreed with the approach of the Board which had found that as long as the role of an ISP in respect of any given transmission is limited to providing the means necessary to allow data initiated by other persons to be transmitted over the internet, and as long as the ancillary services it provides fall short of involving the act of communicating the work or authorising its communication, it should be allowed to claim the exemption. The Court noted that this approach to the liability of suppliers of technological infrastructure is consistent with the approach taken by the Court in Electric Despatch Co of Toronto v Bell Telephone Co of Canada, [FN10] with the Agreed Statement of Facts in Art.8 of the WIPO Copyright Treaty, 1996, and with the approach of the European Union in clause 42 of the E-Commerce Directive.

In refusing to find internet intermediaries liable for providing the means to enable others to communicate works to the public, the Court drew a distinction between the conduit status of an internet intermediary, which does not attract liability, and other functions which an internet intermediary can perform such as acting as a content provider or creating embedded links which automatically precipitate a telecommunication of copyrighted music from another source, which can attract liability.

"In such cases, copyright liability may attach to the added functions. The protection provided by s. 2.4(1)(b) relates to a protected function, not to all of the activities of a particular Internet Service Provider."

The Court held that the conduit status of an internet intermediary applies as long as the internet intermediary does not itself engage in acts that relate to the content of the communication, i.e. whose participation is content neutral, but confines itself to providing "a conduit" for information communicated by others. However, the presence of knowledge of the infringing nature of a work on the part of an ISP would, according the Court, be a factor in the evaluation of that "conduit" status. [FN11]

Liability for Hosting and Caching

After explaining how para.2.4(1)(b) is to be interpreted, the Court went on to apply the provision to two common functions of internet intermediaries, hosting and caching. As to hosting, the Board had found that a host server provider “merely gives the customer [i.e. the content provider] the right to place information on the servers”, and was not generally liable for communications transmitted by the host server operator (at p.441). The Court agreed with not imposing liability on host server operators. It is implicit from the Court’s decision that in performing such function they generally act as mere conduits without the requisite degree of knowledge of infringement to make them liable.

Typically the host server provider will not monitor what is posted to determine if it complies with copyright laws and other legal restrictions. Given the vast amount of information posted, it is impractical in the present state of the technology to require the host server provider to do so. In any event, it is unrealistic to attribute to a provider an expertise in copyright law sufficient to “lawyer” all of the changing contents of its servers on an ongoing basis in the absence of alleged infringements being brought to their attention.

However, to the extent the host server provider has notice of copyrighted material posted on its server, it may, as the Board found, “respond to the complaint in accordance with the [Canadian Association of Internet Providers] Code of Conduct [which] may include requiring the customer to remove the offending material through a ‘take down notice’ “ (at p.441). If the host server provider does not comply with the notice, it may be held to have authorised communication of the copyright material, as hereinafter discussed.

The Court did not go further and speculate as to whether an intermediary providing hosting services might be liable for providing such services in circumstances where it knows or ought to know that the servers it hosts contain infringing materials that are being communicated to the public.

As noted above, the majority in the Federal Court of Appeal had concluded that the use of caching amounts to a function falling outside s.2.4(1)(b). This finding was premised on that Court’s view that the protection of para.2.4(1)(b) is only available “when, without that person’s activity, communication in that medium of telecommunication would not be practicable or, in all probability, would not have occurred”. That test was found by the Supreme Court to be a high eligibility test which could inhibit development of more efficient means of telecommunication. The Court held instead that something is “necessary” “which in the accomplishment of a given object cannot be dispensed with, or it may mean something reasonably useful and proper, and of greater or lesser benefit or convenience”.

The Supreme Court noted that the Board had found as a fact that in the early years of the internet, its usefulness for the transmission of musical works was limited by “the relatively high bandwidth required to transmit audio files”. It also found that this technical limitation was addressed in part by using “caches” and that the use of caches were content neutral and were necessary to maximise the economy and cost-effectiveness of the internet “conduit”. As a consequence of the finding that the use of caching technologies were “necessary” to internet communications, and that such communications “were content neutral” the Court held that para.2.4(1)(b) applied to protect internet intermediaries from liability under s.3(1)(f) of the Act.

In the Board’s view, the means “necessary” under s.2.4(1)(b) were means that were content neutral and were necessary to maximise the economy and cost-effectiveness of the internet “conduit”. That interpretation, it seems to me, best promotes “the public interest in the encouragement and dissemination of works of the arts and intellect” (ThÃ©berge, supra, at para. 30) without depriving copyright owners of their legitimate entitlement. The creation of a “cache” copy, after all, is a serendipitous consequence of improvements in Internet technology, is content neutral, and in light of ***44** s.2.4(1)(b) of the Act ought not to have any legal bearing on the communication between the content provider and the end user.

As noted earlier, SOCAN successfully relied on the “exigencies of the Internet” to defeat the appellants’ argument that they did not communicate a “musical work” but simply packets of data that may or may not arrive in the correct sequence. It is somewhat inconsistent, it seems to me, for SOCAN then to deny the appellants the benefit of a similar “exigencies” argument. “Caching” is dictated by the need to deliver a faster and more economic service, and should not, when undertaken only for such technical reasons, attract copyright liability.

As with hosting, the Court did not speculate on the potential liability of internet intermediaries in circumstances in which the intermediary plays a role in the selection of the content to be cached, or where the intermediary is or could be aware of the content which is cached.

The decision of the Court on the liability of internet intermediaries for caching under s.3(1)(f) of the Act is consistent with law in the United States and England which do not impose liability on internet intermediaries unless there is some element of volition or causation which is lacking where the intermediary's system is merely used by a third party to create a copy or to effect a transmission. [FN12] It is also consistent with legislation in other countries which exempt internet service providers from copyright liability for hosting and caching. [FN13]

Authorising Infringement by Providing a Hosting Service

The Supreme Court of Canada generally agreed with the Federal Court of Appeal on the issue of the liability of internet intermediaries for authorising infringement. The Court observed that when massive amounts of non-copyrighted material are accessible to the end user, it is not possible to impute to the internet service provider, based solely on the provision of internet facilities, an authority to download copyrighted material as opposed to non-copyrighted material. Further, the knowledge that someone might be using neutral technology used by internet intermediaries to provide services to violate copyright is not necessarily sufficient to constitute authorisation, as this requires a demonstration that the defendant did give approval to; sanction, permit; favour, encourage the infringing conduct. The Court observed, however, that copyright liability may well attach if the activities of the internet service provider cease to be content neutral, e.g. if it has notice that a content provider has posted infringing material on its system and fails to take remedial action. The Court's reasons on this issue were expressed as follows:

"The operation of the Internet is obviously a good deal more complicated than the operation of a photocopier, but it is true here, as it was in the CCH case, that when massive amounts of non-copyrighted material are accessible to the end user, it is not possible to impute to the Internet Service Provider, based solely on the provision of Internet facilities, an authority to download copyrighted material as opposed to non-copyrighted material ...

The knowledge that someone might be using neutral technology to violate copyright (as with the photocopier in the CCH case) is not necessarily sufficient to constitute authorization, which requires a demonstration that the defendant did '[g]ive approval to; sanction, permit; favour, encourage' (CCH, para.38) the infringing conduct. I agree that notice of infringing content, and a failure to respond by 'taking it down' may in some circumstances lead to a finding of 'authorization'. However, that is not the issue before us. Much would depend on the specific circumstances. An overly quick inference of 'authorization' would put the Internet Service Provider in the difficult position of judging whether the copyright objection is well founded, and to choose between contesting a copyright action or potentially breaching its contract with the content provider. A more effective remedy to address this potential issue would be the enactment by Parliament of a statutory 'notice and take down' procedure as has been done in the European Community and the United States.

In sum, I agree with the Court of Appeal that 'authorization' could be inferred in a proper case but all would depend on

• The knowledge that someone might be using neutral technology to violate copyright is not necessarily sufficient to constitute authorization, which requires a demonstration that the defendant did give approval to; sanction, permit; favour, encourage the infringing conduct.

• Notice of infringing content, and a failure to respond by 'taking it down' may in some circumstances lead to a finding of 'authorization'.

• An overly quick inference of 'authorization' would put the ISP in the difficult position of judging whether the copyright objection is well founded, and to choose between contesting a copyright action or potentially breaching its contract with the content provider."

TERRITORIAL SCOPE OF THE COPYRIGHT ACT

Internet communications and the growth of e-commerce raise significant conflict of laws questions as to the situs of conduct. The internet is profoundly anti-spacial and negates traditional geographic boundaries. As a result, numerous cases around the globe have had to consider jurisdictional questions arising from internet communications, including issues of personal, regulatory and even constitutional jurisdiction. [FN14] In the Tariff 22 case, the Court expressly recognised the jurisdictional dilemmas caused by the internet and expressly acknowledged that its was deciding the case before it "with an eye to this broader context".

"The issue of the proper balance in matters of copyright plays out against the much larger conundrum of trying to apply national laws to a fast-evolving technology that in essence respects no national boundaries. ... The availability of child pornography on the internet is a matter of serious concern. E-Commerce is growing. Internet liability is thus a vast field where the legal harvest is only beginning to ripen. It is with an eye to this broader context that the relatively precise questions raised by the Copyright Board must be considered. ...

Canada clearly has a significant interest in the flow of information in and out of the country" ...

A failure to recognize such jurisdiction "would have serious consequences in other areas of law relevant to the Internet, including Canada's ability to deal with criminal and civil liability for objectionable communications entering the country from abroad.

The internet presents a particular challenge to national copyright laws which are typically territorial in nature. [FN15] Parliament's power to legislate with extraterritorial effect is well ***45** settled as a matter of Canadian law. [FN16] However, while the Parliament of Canada, unlike the legislatures of the Provinces, has the legislative competence to enact laws having extraterritorial effect, it is presumed not to intend to do so, in the absence of clear words or necessary implication to the contrary. [FN17] This presumption flows from the principle of territoriality, a tenet of international law. Because each State is sovereign in its own territory, it is presumed that States hesitate to exercise jurisdiction over matters that may take place in the territory of other States. [FN18] But, as noted above, this presumption is rebuttable where the contrary intention is expressly stated or implied by the legislation. [FN19]

A central issue raised in the Tariff 22 case was when a communication of a musical work occurs in Canada. According to the Copyright Board, [FN20] to occur in Canada, a communication must originate from a server located in Canada on which content has been placed. As summarised above, the Board held that the place of origin of the request, the location of the person posting the content, and location of the original website are irrelevant. It also held that posting content on a server located outside Canada does not constitute a communication of the work to the public in Canada. However, the Board left open the issue of whether an entity that provides content outside Canada with the intention to communicate it specifically to recipients in Canada is communicating it in Canada.

The views expressed by the Copyright Board in the Tariff 22 case, as to what activities need to occur in Canada for a communication to the public to be complete was criticised on appeal by the Federal Court of Appeal. The Federal Court of Appeal expressed the opinion that since the very notion of communication requires a communicator and an intended recipient, it was wrong for the Board to have concluded that the location of the communication should solely be determined by that of the host server. This was especially the case as the Board had found that the internet communications under consideration were only ever affected at the request of the end user. According to the court, the proper test to apply to determine where the communication occurs is the real and substantial connection test. According to the court, that test could be applied to determine the location of the infringing activity, as well as the location of the infringing activity of authorising a communication that occurs when a content provider posts copyright material on a host server.

The majority of the Supreme Court of Canada also disagreed with the Board's view that a communication that does not originate in Canada does not occur in Canada. The Court expressed the view that this is "too rigid and mechanical a test". According to the Court, an internet communication that crosses one or more national boundaries "occurs" in more than one country, at a minimum the country of transmission and the country of reception. At the end of the transmission, the end user has a work in his or her possession that was not there before. The work has, necessarily, been communicated, irrespective of its point of origin. The Court, therefore, concluded that the Copyright Board erred in law when it ignored all connecting factors other than the location of the host server for the purpose of identifying communications that occur in Canada.

Having found that the Board erred in holding that the only relevant connection between Canada and the communication is the location of the host server, the Court next had to determine, as a matter of statutory interpretation, what connecting factors are sufficient to impose copyright liability for transborder communications. In considering this issue, the Court noted that in the absence of clear words to the contrary, courts presume that Parliament does not intend its legislation to receive extraterritorial application. Further, the Court recognised that copyright law respects the territorial principle, reflecting the implementation of a "web of interlinking international treaties" based on the principle of national treatment. The Court expressed the opinion that these principles could be satisfied by applying the "real and substantial connection" test to determine whether there is a sufficient connection between Canada and transborder communication for Canada to apply its law consistent with the "principles of order and fairness".

The "real and substantial connection" test had previously been adopted and developed by the Supreme Court of Canada in numerous cases. [FN21] From the outset, however, this test had been viewed as an appropriate way to prevent overreaching, to restrict the exercise of jurisdiction over extraterritorial and transnational transactions, in a manner consistent with the principles of international comity, order and fairness. [FN22] Historically, the test was not applied as a principle of statutory construction or legislative jurisdiction to achieve certainty, ease of application and predictability in determining the substantive law to be applied to a dispute. The test applied only to the courts. [FN23] As noted, above, however, in the Tariff 22 case, the Supreme Court applied the real and substantial connection test to determining the applicability of the Copyright Act to internet communications that have international participants. The use of this test will undoubtedly be applied in future copyright cases. Further, in view of the Court's statement that the case was being decided "with an eye" to the broader context of internet liability, it can be expected that the real and substantial link test will be applied in a variety of other cases involving transborder communications.

The Court observed that whether or not a real and substantial connection exists in any particular fact situation ***46** will turn on the facts of a particular transmission. In this regard, the Court noted that foreign content providers whose music is telecommunicated to a Canadian end user will not automatically be subject to liability; a content provider will not necessarily be immunised from copyright liability by virtue only of the fact it employs a host server outside the country; and conversely, a host server does not attract liability just because it is located in Canada. The decision of the Court raises the spectre of imposition of copyright liability on a single telecommunication in both the state of transmission and the state of reception. The Court recognised this potential problem but observed that "as with other fields of overlapping liability (taxation for example), the answer lies in the making of international or bilateral agreements, not in national courts straining to find some jurisdictional infirmity in either State."

CONCLUSION

The increasing use of the internet is bound to spawn considerable litigation concerning the liability of intermediaries for copyright infringement and the applicable laws to apply thereto. The Supreme Court of Canada's decision is one of the first significant cases in the Commonwealth to tackle these issues. It is undoubtedly the first in what will be many cases to consider these thorny issues.

FOOT NOTES

FN*. Barry Sookman and Thomas Heintzman were counsel for the Appellants in the Supreme Court of Canada in the Tariff 22 case referred to below.

FN1. Def Lepp Music v Stuart-Brown [1986] R.P.C. 273 (Ch.D.); Pearce v Ove Arup Partnership Ltd [2000] Ch. 403 at 438; Tyburn Productions Ltd v Doyle [1990] 1 All E.R. 909 (Ch. Div.); Mother Bertha Music Ltd v Bourne Music Ltd [1997] E.M.L.R. 457 (Ch. Div.); Atkinson Footwear Ltd v Hodgskin International Services Ltd (1994) 31 I.P.R. 186 (H.C.N.Z.); Subafilms Ltd v MGM-Pathe Communications Co, 30 U.S.P.Q. 2d 1746 (9th Cir. 1994);

FN2. Berne Convention, Art.5; Bradley, "Territorial Intellectual Property Rights in An Age of Globalism" (1997) 37 Va. J.Int'l L. 505 at 16-17, 28; Austin, "Domestic Laws and Foreign Rights: Choice of Law in Transnational Copyright Infringement Litigation" (1999) 23 Colum. VLA J.L. & Arts 1 at pp.11- 12.

FN3. Tolofson v Jensen [1994] 3 S.C.R. 1022 at 1047, 1049-1050, 1052.

FN4. 2004 S.C.C. 45.

FN5. Tariff 22, Oct 18, 1997.

FN6. The breadth of SOCAN's intended targets is evident from the definition of the term "Telecommunications Service" found in the tariff. That term was defined as follows: " 'Telecommunications service' includes a service known as a computer on-line service, an electronic bulletin board service (BBS), a network server or a service provider or similar operation that provides for or authorizes the digital encoding, random access and/or storage of musical works or portions of musical works in a digitally encoded form for the transmission of those musical works in digital form via a telecommunications network or that provides access to such a telecommunications network to a subscriber's computer or other device that allows the transmission of material to be accessed by each subscriber independently of any other person having access to the service."

FN7. Para.2.4(1)(b) of the Act reads as follows: "a person whose only act in respect of the communication of a work or other subject-matter to the public consists of providing the means of telecommunication necessary for another person to so communicate the work or other subject matter does not communicate that work or other subject-matter to the public".

FN8. The Court pointed out that the meaning of the term "necessary" varies with the context. Quoting from Black's Law Dictionary, the court noted that the term can mean "something which in the accomplishment of a given object cannot be dispensed with, or it may mean something reasonably useful and proper, and of greater or lesser benefit or convenience, and its force and meaning must be determined with relation to the particular object sought. [Emphasis added.] (Black's Law Dictionary (6th ed., 1990), at p.1029).

FN9. para.89 citing see Menear v Miguna (1996) 30 O.R. (3d) 602 (Gen. Div.), reversed on other grounds (1997) 33 O.R. (3d) 223 (CA); Newton v City of Vancouver (1932) 46 B.C.R. 67 (S.C.); Sun Life Assurance Co of Canada v W.H. Smith & Son Ltd [1933] All E.R. 432 (CA). See generally R.E. Brown, The Law of Defamation in Canada (2nd ed. (loose-leaf)), vol. 1, at Â§7.12(6).

FN10. (1891) 20 S.C.R. 83, at p.9. See the discussion of this case in footnote 1037.79.26.

FN11. Para.2.4(1)(b) does not contain any reference to a knowledge requirement. Unfortunately, the Court did not explain why the presence or absence of knowledge would contribute to or the conduit status of an ISP.

FN12. The Court referenced Religious Technology Center v Netcom On-line Communication Services, Inc 907 F.Supp. 1361 (N.D. Cal. 1995), acknowledging that a comparable result had been achieved in the United States.

FN13. Ibid.

FN14. See, B. Sookman, Computer, Internet and E-Commerce law (Carswell, 2000- 2004), Ch.11.

FN15. SOCAN v Canadian Association of Internet Providers 2004 S.C.C. 45. See, Geller, “Conflicts of Laws in Cyberspace: Rethinking International Copyright in a Digitally Networked World, 20 Colum. VLA J.L. & Arts 571; Ginsburg, “Global Use/ Territorial Rights: Private International Law Questions of the Global Information Infrastructure” 42 J. Copyright Soc’y. U.S.A. 318.

FN16. Reference re Offshore Mineral Rights of British Columbia [1967] S.C.R. 792, at 816; Reference re Newfoundland Continental Shelf [1984] 1 S.C.R. 86, at 103; Croft v Dunphy [1933] A.C. 156.

FN17. Society of Composers, Authors and Music Publishers of Canada v Canadian Association of Internet Providers 2004 SCC 45.

FN18. Morguard Investments Ltd v De Savoye [1990] 3 S.C.R. 1077.

FN19. Bolduc v Attorney General of Quebec [1982] 1 S.C.R. 573 at 578; Arcadi v The King [1932] S.C.R. 158, at 159

FN20. SOCAN Statement of Royalties, Public Performance of Musical Works 1996, 1997, 1998 (Tariff 22, Internet) (1999) 1 C.P.R. 4th 417 (Copyright Board).

FN21. See, for example, Morguard Investments Ltd v De Savoye [1990] 3 S.C.R. 1077; Hunt v T & N plc [1993] 4 S.C.R. 289; Tolofson v Jensen [1994] 3 S.C.R. 1022; Holt Cargo Systems Inc v ABC Containerline N.V. (Trustees of) [2001] 3 S.C.R. 907; Spar Aerospace Ltd v American Mobile Satellite Corp [2002] 4 S.C.R. 205; Unifund Assurance Co v Insurance Corp of British Columbia [2003] 2 S.C.R. 63; Beals v Saldanha [2003] 3 S.C.R. 416.

FN22. ibid.

FN23. SOCAN v Canadian Association of Internet Providers, 2004 S.C.C. 45, per Lebel J. in dissent at para.147. See, for example, Unifund Assurance Co v Insurance Corp of British Columbia 2003 SCC 40 (S.C.C.) at paras.54-91 (the Supreme Court distinguished the personal jurisdictional cases from the case of the territorial application of provincial legislation and held that the principles of order and fairness required that Ontario’s Insurance Act not be given extra-territorial application); Tolofson v Jensen [1994] 3 S.C.R. 1022 (the Supreme Court rejected the application of the real and substantial connection test in favour of the law governing the place of the tort (the lex loci delicti).

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Case Comment

STANDARD OF ORIGINALITY FOR PROTECTION OF WORKS AND FAIR DEALING DEFENCE-RE-EXAMINED

Barry Sookman.

Case: CCH Canadian Ltd v Law Society of Upper Canada (2004) S.C.C. 13 (Sup Ct (Can))

Legislation: Copyright Act (Canada) s.29

Subject: INTELLECTUAL PROPERTY

Keywords: Authorisation; Canada; Copyright; Fair dealing; Infringement; Originality; Photocopying

Abstract: Discusses the significance of the Supreme Court of Canada's judgment in CCH Canadian Ltd v Law Society of Upper Canada on whether the Law Society had infringed copyright by: (1) offering a custom photocopy service to patrons for copies of works owned by legal publishers; and (2) maintaining self-service photocopiers and copies of published works at a library for the use of patrons. Focuses on whether the publishers' materials were "original works" for the purpose of copyright protection, whether the library authorised infringement and whether its dealings with the works amounted to "fair dealing" under the Copyright Act s.29.

101 The Supreme Court of Canada recently released its decision in the CCH v Law Society case. [FN1] The decision radically changes Canadian copyright law on the standard of originality for the protection of works in Canada. It expands the scope of the "fair dealing" defence to infringement. It also continues a transformation of Canadian copyright law started by the Court in the ThÃ©berge [FN2] case, which shifted the emphasis from protecting the labour and investments of authors to a balance between promoting the public interest in the encouragement and dissemination of works and rewarding authors for their creative efforts.

The main issues in the appeal were :

â•¢ Did the Law Society of Upper Canada infringe copyright by either:

1. providing a custom photocopy service in which single copies of works owned by legal publishers are reproduced and sent to patrons upon their request; or

2. maintaining self-service photocopiers and copies of publishers' works in the Law Society's Great Library for use by its patrons.

To answer these questions, the Court was called upon to answer a number of other questions, including:

1. Were the publishers' materials "original works" protected by copyright?

2. Did the Great Library authorise copyright infringement by maintaining self-service photocopiers and copies of the publishers' works for its patrons' use?

3. Were the Law Society's dealings with the publishers' works "fair dealings" under s.29 of the Copyright Act?

Until the ThÃ©berge case, there was a consistent theme in Canadian copyright law that the purpose of copyright was to protect creators. For example, the Chief Justice of the Supreme Court of Canada who wrote the unanimous judgment in the CCH case had written in a prior judgment [FN3] that the Copyright Act "was passed with a single object, namely, the benefit of authors of all kinds". [FN4] In the CCH case, the Court took the opportunity to expound upon its current philosophy concerning the underlying purposes of copyright first expressed in the ThÃ©berge case. Writing for the Court, the Chief Justice stated the following:

"Binnie J. recently explained in ThÃ©berge, supra, at paras 30-31, that the Copyright Act has dual objectives:

- The Copyright Act is usually presented as a balance between promoting the public interest in the encouragement and dissemination of works of the arts and intellect and obtaining a just reward for the creator ...

- The proper balance among these and other public policy objectives lies not only in recognizing the creator's rights but in giving due weight to their limited nature.

In interpreting the Copyright Act, courts should strive to maintain an appropriate balance between these two goals."

ORIGINALITY REQUIREMENT

For a work to be protected by copyright in Canada it must be “original”. Prior to the decision in the CCH case, the overwhelming majority of Anglo-Canadian cases protected a work if it had not been copied from another work and if more than a trivial amount of either labour (including sweat of the brow or industriousness), skill or judgment went into creating the work. [FN5] The term “original” had consistently and authoritatively been interpreted to mean to “bring into existence” or ***102** to “produce”. [FN6] Anglo-Canadian copyright also protected facts in a compilation from copying or extraction as long as a sufficient amount of skill, judgment or labour was used in creating the compilation. [FN7]

In the CCH case, the Court rejected the traditional Anglo-Canadian standard for originality. It also rejected the standard in effect in the United States which requires that a work exhibit at least a modicum of “creativity” to be protected. [FN8] The Court instead developed a new standard based on the following principles:

- The work must originate from an author and not be copied from another work.
- The work must be the product of an author’s exercise of skill and judgment.
- The exercise of skill and judgment must not be so trivial that it could be characterised as a purely mechanical exercise.
- Labour, “sweat of the brow” or “industriousness” is not enough.
- “Creativity” is not required to make a work “original”.
- Copyright does not extend to facts.

Prior to the CCH case, no Anglo-Canadian case had attempted to define what was meant by the terms “skill” and “judgment”. The Court, departing from previous decisions which eschewed any attempt to comprehensively define these concepts, defined the terms “skill” and “judgment” as follows:

“By skill, I mean the use of one’s knowledge, developed aptitude or practised ability in producing the work. By judgment, I mean the use of one’s capacity for discernment or ability to form an opinion or evaluation by comparing different possible options in producing the work. This exercise of skill and judgment will necessarily involve intellectual effort. The exercise of skill and judgment required to produce the work must not be so trivial that it could be characterized as a purely mechanical exercise.”

The new standard of originality created by the Court will not impact the vast majority of works currently protected by copyright. In fact, the Court, in applying the test, protected all of the works in issue in the case including the legal publisher’s headnotes, a case summary and a topical index. The Court’s requirement for both skill and judgment will, however, raise the threshold of protection from what was required under previous case law.

The Court’s elimination of “labour” as a factor that can contribute to the originality of a work will result in the lessening of protection for “whole universe” compilations and databases. Protection will be limited, as in the United States, to selections or arrangements of facts in a compilation that are produced only by skill and judgment. The Court’s decision also weakens protection against extraction of data from databases where the “originality” is in the arrangement of data.

AUTHORIZATION-THE SELF-SERVICE PHOTO-COPIERS

One of the central disputes in the CCH case was whether the Law Society was liable for having “authorised” infringement by making available to its patrons free-standing photocopiers as well as copies of works of the legal publisher. The Federal Court of Appeal had found such action to be infringing. That court had ruled that “Although the Law Society does not expressly purport to grant its patrons the right to make reproductions, no other inference can reasonably be drawn from the Law Society’s provision of and control over its freestanding photocopiers.” [FN9] That court had also ruled that “Although it may be true that a person can initially presume that the protected act is carried out in accordance with the law, where the evidence suggests otherwise, such an assumption is unreasonable. In this case the evidence clearly shows that the Law Society has sufficient reason to suspect that not all patrons will use the free-standing photocopiers for legitimate purposes.” [FN10]

The Federal Court of Appeal had also referred approvingly to a decision of the High Court of Australia in Moorehouse, [FN11] which held that there can be infringement of copyright by authorisation if a person:

1. has under his control the means by which an infringement of copyright may be committed “such as a photocopying machine”;

2. makes it available to other persons, knowing, or having reason to suspect, that it is likely to be used for the purpose of committing an infringement; and

3. omits to take reasonable steps to limit its use to legitimate purposes.

The Supreme Court of Canada declined to follow the Moorhouse decision because it was not consistent with previous decisions of the Court and because it "shifts the balance in copyright too far in favor of the owner's rights and unnecessarily interferes with the proper use of copyrighted works for the good of society as a whole". [FN12]

The Court accepted long-established authority in holding that the term "authorise" means to "sanction, approve and countenance". However, the Court then went on to state that the term "countenance" "must be understood in its strongest dictionary meaning, namely, 'give approval to, sanction, permit, favour, encourage'". The Court also held the following with respect to what is required to prove infringement by authorisation:

- Authorisation can be inferred from acts that are less than direct and positive, including a sufficient degree of indifference.

- A person does not authorise infringement by authorising the mere use of equipment that could be used to infringe copyright.

***103** â•¢ Courts should presume that a person who authorises an activity does so only so far as it is in accordance with the law. This presumption may be rebutted if it is shown that a certain relationship or degree of control existed between the alleged authoriser and the persons who committed the copyright infringement.

The Court, in applying this test to the facts of the case, found that the Law Society was not liable for having authorised the reproduction of works by making free-standing photocopiers available for use by patrons. The Court found no evidence that photocopiers had been used in an infringing manner. Furthermore, the Court found that the Law Society lacked sufficient control over the Great Library's patrons to permit the conclusion that it sanctioned, approved or countenanced the infringement. The Law Society and Great Library patrons were not in a master-servant or employer-employee relationship such that the Law Society could be said to exercise control over the patrons who might commit infringement. As well, the Law Society did not exercise control over which works the patrons chose to copy, the patron's purposes for copying or the photocopiers themselves. [FN13]

Fair Dealing

Another central issue in the case was whether the Great Library's custom photocopy service, in which single copies of works owned by legal publishers were reproduced and sent to patrons upon their request, constitutes a "fair dealing" for research purposes. To be a fair dealing, the dealing must be for one of the authorised purposes set out in the Act, e.g. research, and the dealing itself must be "fair". The Court had to determine both of these questions.

Before canvassing these questions, the Court expressed its view of the purpose of the various statutory exemptions from infringement and how they should be interpreted in Canada. In the ThÃ©berge case, [FN14] Binnie J. of the Supreme Court stated the following on this point:

"Excessive control by holders of copyrights and other forms of intellectual property may unduly limit the ability of the public domain to incorporate and embellish creative innovation in the long-term interests of society as a whole, or create practical obstacles to proper utilization. This is reflected in the exceptions to copyright infringement enumerated in ss.29 to 32.2, which seek to protect the public domain in traditional ways such as fair dealing for the purpose of criticism or review and to add new protections to reflect new technology, such as limited computer program reproduction and 'ephemeral recordings' in connection with live performances."

In the CCH case, the Court expanded on this philosophical view of the role of exemptions in Canadian copyright law. The Court stressed the need to give exemptions from infringement a broad interpretation:

"The fair dealing exception is perhaps more properly understood as an integral part of the Copyright Act than simply a defence. Any act falling within the fair dealing exception will not be an infringement of copyright. The fair dealing exception, like other exceptions in the Copyright Act, is a user's right. In order to maintain the proper balance between the rights of a copyright owner and users' interests, it must not be interpreted restrictively. As Professor Vaver, supra, has explained, at p.171: 'User rights are not just loopholes. Both owner rights and user rights should therefore be given the fair and balanced reading that befits remedial legislation.'" [FN15]

Turning to the issue of the meaning of the term "research", the Court stated that this term "must be given a large and liberal interpretation in order to ensure that users' rights are not unduly constrained". The Court also held that the term is not limited to non-commercial or private contexts. The Court did not attempt to further define or limit the meaning of the term. In particular, the Court did not refer to other Commonwealth decisions which had defined research as “a diligent and systematic enquiry or investigation into a subject in order to discover facts or principles” or “searching into a subject or matter or the investigation or close study of it”. [FN16]

Another central issue in the case was whether the Law Society could claim the benefit of the fair dealing exemption as the Law Society itself was not engaged in any research. Prior Commonwealth cases had restricted the benefit of the exemption in like legislation to the copier, e.g. the purpose of the copying was for the copier’s own research purpose. [FN17] The Federal Court of Appeal had been prepared to extend the benefit of the exemption to the Law Society if its copying activity was made on behalf of a requester.

The Supreme Court of Canada extended the benefit of the exemption even further than the Federal Court of Appeal, or any other Commonwealth court with similar legislation. According to the Court:

“The term ‘dealing’ connotes not individual acts, but a practice or system ... Persons or institutions relying on the s.29 fair dealing exception need only prove that their own dealings with copyrighted works were for the purpose of research or private study and were fair. They may do this either by showing that their own practices and policies were research-based and fair, or by showing that all individual dealings with the materials were in fact research-based and fair.” [FN18]

The Court, applying this test, held that when the Great Library staff make copies of works, they do so for the purpose of research. According to the Court:

“Although the retrieval and photocopying of legal works are not research in and of themselves, they are necessary conditions of research and thus part of the research process. The reproduction of legal works is for the purpose of research in that it is an essential element of the legal research process. There is no other purpose for the copying; the Law Society does not profit from this service.” [FN19]

****104*** The Court then addressed the meaning of the term “fair”. The Court accepted the following non-exclusive factors that had been proposed by the Federal Court of Appeal as relevant to that determination: (1) the purpose of the dealing; (2) the character of the dealing; (3) the amount of the dealing; (4) alternatives to the dealing; (5) the nature of the work; and (6) the effect of the dealing on the work. [FN20]

The Court also made a number of important observations regarding the concept of fairness. They include the following:

- Research done for commercial purposes may not be as fair as research done for charitable purposes.

- If multiple copies of works are being widely distributed, this will tend to be unfair.

- The amount of the work copied is an important factor in assessing the fairness of a dealing.

- The alternatives to copying can effect the determination of fairness.

- The effect of the copying is an important factor. If a copy is made to compete in the market for the original work, or for a rival purpose, this suggests that the dealing is not fair.

- The availability of a licence from a collective society is not relevant to deciding whether a dealing has been fair.

After reviewing these factors, the Court found the actions of the Great Library in making copies in accordance with its Access to Law Policy to be a fair dealing.

CONCLUSION

The CCH case will be regarded as a seminal Canadian case on the issues of “originality” and the scope of the “fair dealing” defence. The case settles the standard of originality that is required in Canada for all works including compilations to require more than trivial “skill and judgment”. This will leave most works protected in Canada, but will create some problems for the protection of compilations. The case also enshrines the importance of users’ rights in construing the Copyright Act. It establishes that commercial research can be a fair dealing. It also establishes a list of factors that must be considered to determine if a dealing with a work is “fair”.

FOOT NOTES

FN1. CCH Canadian Ltd v Law Society of Upper Canada, 2004 S.C.C. 13.

FN2. ThÃ©berge v Galerie d’Art du Petit Champlain Inc (2002) 17 C.P.R. (4th) 161, SCC.

FN3. Bishop v Stevens [1990] 2 S.C.R. 467

FN4. This view of copyright is consistent with previous authority. Duff J. of the Supreme Court had stated in an earlier judgment of the Court that the purpose of copyright is to prevent persons from "unfairly availing themselves of the work of others" and that the "protection of authors is the object to be attained by all copyright laws". Vigneux v Canadian Performing Rights Society [1943] S.C.R. 348, reviewed [1945] A.C. (108), PC. Lord Atkinson of the English Privy Council summarised the historical purpose of copyright as follows: "The moral basis of copyright rests on the 8th commandment 'Thou shalt not steal'." MacMillan & Co Ltd v Cooper (1923) 40 T.L.R. 186, (PC).

FN5. Slumber-Magic Adjustable Bed Co Ltd v Sleep-King Adjustable Bed Co (1984) 3 C.P.R. (3d) 81 at 84-85, BCSC; Prism Hospital Software Inc v Hospital Medical Records Institute (1994) 57 C.P.R. (3d) 129 at 271, 272-273, BCSC; Underwriters' Survey Bureau Ltd v American Home Fire Assurance Co [1939] 4 D.L.R. 89 at 95, Ex Ct; Cuisenaire v South West Imports Ltd (1967) 54 C.P.R. 1 at 13-14, Ex Ct, affirmed (1968) 57 C.P.R. 76, SCC; Ladbroke (Football) Ltd v William Hill (Football) Ltd [1964] 1 All E.R. 465 at 469, HL; Football League Ltd v Littlewood's Pools Ltd [1959] 2 All E.R. 546 at 551-552, Ch D; Bookmakers' Afternoon Greyhound Services Ltd v Wilf Gilbert (Staffordshire) Ltd [1994] F.S.R. 723 at 731, Ch D; Desktop Marketing Systems Pty Ltd v Telstra Corp Ltd (2002) 55 I.P.R. 1 at 42, 102, Fed Ct Aust FC. The Tele-Direct (Publications) Inc v American Business Information Inc (1997) 76 C.P.R. (3d) 296, Fed CA, case had suggested that labour alone was not sufficient to create a protectable compilation. However, this decision was widely criticised. See Desktop Marketing Systems Pty Ltd v Telstra Corp Ltd (2002) 55 I.P.R. 1, Fed Ct Aust FC; Tawfik, "Decompiling the Federal Court of Appeal's 'NAFTA argument' in Tele-Direct (Publications) Inc v American Business Information Inc—From Facts to Fiction" (2001-02) 33 Ottawa Law Review 147.

FN6. University of London Press Ltd v University Tutorial Press Ltd [1916] 2 Ch. 601 at 608-609, Ch D; Delrina Corp v Triolet Systems Inc (2002) 58 O.R. (3d) 339 at 350, Ont CA, leave to appeal to SCC denied November 28, 2002; Prism Hospital Software Inc v Hospital Medical Records Institute (1994) 57 C.P.R. (3d) 129 at 269, BCSC; Kilvington Bros Ltd v Goldberg (1957) 16 Fox Pat. C. 164 at 167, Ont HC; Interlego AG v Tyco Industries Inc [1989] 1 A.C. 217 at 259- 260; Express Newspapers plc v News (UK) Ltd [1990] 3 All E.R. 376 at 380-381, Ch D; Sands & McDougall Pty Ltd v Robinson (1917) 23 C.L.R. 49, Aust HC; LB (Plastics) Ltd v Swish Products Ltd [1979] R.P.C. 551 at 566-567, HL.

FN7. See, e.g. British Columbia Jockey Club v Standen (1985) 22 D.L.R. (4th) 467, BCCA.

FN8. See Feist Publications Inc v Rural Telephone Service Co Inc (1991) 499 U.S. 340.

FN9. (2002) 18 C.P.R. (4th) 161 at para.[109], Fed CA.

FN10. ibid. at para.[111].

FN11. Moorehouse v University of New South Wales [1976] R.P.C. 151, Aust HC.

FN12. CCH at para.[41].

FN13. Although the Copyright Act contains a specific regime that addresses copyright infringement in the context of free-standing photocopiers, the Court did not advert to such regime to assist in ascertaining Parliament's intentions in regards to this issue of infringement. See s.30.3.

FN14. Above, n.2, at para.[32].

FN15. Above, n.1, at para.[48].

FN16. See Television New Zealand v Newsmonitor Services Ltd (1993) 27 I.P.R. 441 at 463, HCNZ; DeGaris v Neville Jeffress Pidler Pty Ltd (1990) 95 A.L.R. 625 at 629, FC.

FN17. Sillitoe v McGraw-Hill Book Co (UK) Ltd [1983] F.S.R. 545 at 558, Ch D; University of London Press Ltd v University Tutorial Press Ltd [1916] 2 Ch. 601 at 613, Ch D; Television New Zealand v Newsmonitor Services Ltd (1993) 27 I.P.R. 441 at 463, HCNZ; Hager v ECW Press Ltd (1998) 85 C.P.R. (3d) 289 at 311, FCTD; DeGaris v Neville Jeffress Pidler Pty Ltd (1990) 95 A.L.R. 625 at 629, FC, RBA, Tab. 10; Longman Group Ltd v Carrington Technical Institute Board of Governors [1991] 2 N.Z.L.R. 574 at 584, H Ct.

FN18. para.[63].

FN19. ibid. at para.[64]. It is noteworthy that the Court found the Great Library to be a "library" within the meaning of s.30.2 of the Copyright Act (the library exemption), but then declined to use the express library exemption to construe the fair dealing defence. S.30.2 of the Act implies that a library cannot make copies on behalf of a patron unless the conditions in the section are met. See Longman Group Ltd v Carrington Technical Institute Board of Governors [1991] 2 N.Z.L.R. 574, H Ct, which reached an opposite conclusion to that of the Court.

FN19. ibid.

E.I.P.R. 2005, 27(2), N34-36

European Intellectual Property Review

2005

Case Comment

EC: TRADE MARKS - COLOUR MARKS

Aaron Wood.

Case: KWS Saat AG v Office for Harmonisation in the Internal Market (Trade Marks and Designs) (OHIM) (C-447/02 P) (Unreported, October 21, 2004) (ECJ)

Legislation: Council Regulation 40/94 on the Community trade mark Art.7(1)

Subject: INTELLECTUAL PROPERTY

Keywords: Colour; Community trade marks; Distinctiveness; EC law

Abstract: Reviews the European Court of Justice ruling in KWS Saat AG v Office for Harmonisation in the Internal Market (Trade Marks and Designs) (OHIM) (C- 447/02 P) on whether an application to register a certain shade of the colour orange as a Community trade mark in relation to agricultural, horticultural and forestry products should be refused on the grounds that it was devoid of distinctive character for the purposes of Council Regulation 40/94 Art.7(1). Comments on the ways in which applicants for registration as a trade mark of a "bare" colour might reduce the risk of refusal.

The registrability of "bare" colours has been a point of discussion for a number of years. While a few fortunate companies (such as T-Mobile) have managed to register their corporate colours, many have found to their expense that they cannot convince registrars to accept bare colours. This judgment of the European Court of Justice confirms the status quo, the roots of which go back to the ECJ decision in Libertel. [FN1]

Facts: KWS Saat filed an application at OHIM to register a particular shade of orange in relation to agricultural, horticultural and forestry products, treatment installations for seeds and technical and, in class 42, business consultancy in relation to plant cultivation. The application was refused on the basis that it was not distinctive within the meaning of Art.7(1)(b).

***M-35** KWS Saat appealed to the Second Board of Appeal and the appeal was refused. The Board agreed that the mark was devoid of distinctive character. The Board discovered from research that the colour was not original or unusual within the sector and that it was normal procedure for seed manufacturers to dye their seeds to indicate that they had been treated. The Board referred to a website which apparently confirmed this point.

Undeterred, KWS Saat appealed to the Court of First Instance. The CFI upheld the decision of the Board of Appeal on distinctiveness in relation to the seeds and the treatment installations, but held that the mark was distinctive of the services in class 42. KWS Saat had also argued that the Board had infringed their right to be heard under Art.73 by relying on the website without giving KWS Saat the opportunity to comment. The CFI rejected this argument on the basis that the website covered grounds with which KWS Saat were already acquainted. Finally, KWS Saat argued that the Board did not consider the facts of its own motion. The CFI rejected that ground completely.

Held: Colour-blind perhaps to the inevitable, KWS Saat appealed one final time, to the ECJ. They argued that the CFI had made an error on the requirement that the Board of Appeal needed to examine the facts, on the basis that the CFI did not review the level at which the Board had looked at the facts. The ECJ took the view that this was seeking to cast doubt on the appraisal of the facts made by the Board of Appeal and the CFI, and as such not permitted before the ECJ.

Secondly, KWS Saat contended that the CFI was incorrect to decide that the Board of Appeal had not infringed their right to be heard. On this point the ECJ agreed, since the Board neglected to forward the results of its research or the contents of the website to KWS Saat for comment. This was to be a pyrrhic victory, however, as the ECJ found that even if the Board's rulings on the research and the website were invalidated, they were merely confirmatory and did not lead to the annulment of the whole decision. KWS had argued as a side argument to this point that by depriving them of the opportunity to comment on the evidence, they were deprived of the opportunity to restrict the specification of goods and services in light of the evidence. The ECJ rejected this too—the failure to restrict their specification at any point in the proceedings was their own fault and not that of the Board of Appeal. In any event, it appeared that restriction would not have assisted them.

Thirdly, KWS Saat argued that the CFI had misapplied the requirements relating to the need for the Board of Appeal to give reasons for the decision. On the facts this was rejected by the ECJ. The Board of Appeal had set out in detail the applicable point of law and then set out why the colour orange was not unusual in relation to the goods or services of interest.

Finally, KWS Saat argued that the CFI had misapplied the law relating to lack of distinctive character under Art.7(1)(b). KWS Saat unsurprisingly (but unsuccessfully) argued that the CFI had applied a more stringent test than would be applied to a word mark, that it erred in relation to the criterion of distinctive character and it substituted its own appraisal for that of the relevant sector.

The ECJ held that the CFI was correct to state that while all marks undertake the same test, the relevant public's perception is not necessarily the same in relation to a sign composed of a colour per se as it is for a word or device which is independent of the appearance of the goods. While the public is accustomed to perceiving words and devices immediately as signs identifying the commercial origin of goods, the same cannot be said to be true where the sign forms part of the appearance of the goods.

The ECJ went on to state that distinctiveness of a colour without evidence of acquired distinctiveness through use is inconceivable save in exceptional circumstances. Such circumstances may apply where the number of goods or services for which the mark is claimed is very restricted and the relevant market very specific. In this case the use of colours (including orange) was found not to be rare and so the test had been applied correctly. The ECJ also ruled that the question of whether the CFI had relied on its own appraisal rather than the sector was a question of fact and, as before, was deemed inadmissible.

Comment: The case confirms the difficulty in obtaining a registration for a "bare" colour. For the unfortunate applicant of a new application to register a "bare" colour the risk of refusal can be reduced by being specific as to how the colour will be used, by picking a particularly unusual shade and by proving that the mark has become ***N-36** distinctive through use (if the mark has been used). Colours are particularly valuable to companies, however, so if you do succeed then you really will be able to paint the town a particularly unique shade of red. Once again there is reference to the fact that the number of goods or services affects the distinctiveness under Art.7(1)(b). With respect, it seems a strange position to hold. It suggests that an application for a single application covering a broad range of goods may be unacceptable, but two applications may be registrable. In the author's opinion, the distinctive character must be assessed with reference to the particular goods or services and the perception of the relevant consumers; the number of goods or services does not affect this perception—it simply adds more work when acquired distinctiveness invariably has to be proved.

EIPR 2005, 27(1), N3-4
Case Comment

GERMANY: TRADE MARKS - REGISTRABILITY OF THREE-DIMENSIONAL TRADE MARKS CONSISTING ONLY OF THE PRODUCT FOR WHICH IT CLAIMS PROTECTION

Joachim Wessel

Facts: The plaintiff sought protection in Germany for the three-dimensional IR-mark 670 278 for "fromage, produits laitiers" (cheese, dairy products). The trade mark at issue was the shape of the actual cheese. The shape resembled a flower with six petals formed by indentations. It had a corrugated surface with white and orange stripes. The German Patent and Trade Mark Office denied protection for it on the basis of lack of any distinctive character.

The applicant's appeal was rejected by the Federal Patent Court and so they appealed to the Supreme Court.

Held: The Federal Patent Court held that the mark was not distinctive and therefore not eligible for registration. The shape of the product required an unusual look in order to be considered distinctive, since the relevant public was not used to distinguishing the product "cheese" by its shape. Indeed the court found that the indentations forming the particular shape were meant to help to divide the product into equal parts and therefore simply served a technical function.

The Federal Supreme Court decided that the Federal Patent Court had established too high demands in respect of the requirements for distinctiveness of a three-dimensional trade mark, although the Federal Patent Court had accepted the "telle quelle" rule in considering the geographical extension of protection of the IR mark in question. Sections 3 and 8(2) of the German Trade Mark Act have been enacted in full compliance with such rule. These provisions have to be interpreted in the light of Directive 89/104 of December 21, 1998 to approximate the laws of the Member States. A trade mark requires the integration of elements that help the consumer distinguish the goods in question from other competitors' products. The Federal Supreme Court stated that any distinctive character leads to the registrability of a trade mark. For the evaluation of the registrability of three-dimensional trade marks the same criteria as for all other types of trade marks should apply.

Two-dimensional depictions that only reflect goods are usually considered nondistinctive; the exact picture of the product is not capable of providing distinctiveness of a product from those of other manufacturers. To achieve such a capability a pure depiction of the goods must display more than the elements of which the product consists.

The same rule applies for three-dimensional marks. If the shape is purely descriptive as to the function of the product or describes technically necessary requirements it is ***N4** non-registrable owing to a lack of distinctiveness. The relevant public will consider a specific shape as a measure of distinction only if it does not consider the form necessary to serve a concrete function of the product or only as a simple effort to create an aesthetically appealing product.

According to the Federal Supreme Court it also depends on the generic type of product whether the consumer will assume that a specific shape is only functional or distinctive. The Federal Supreme Court found that, for example, particular shapes of foodstuffs are more likely to be seen as distinctive than the shapes of clothes or technical equipment. Additionally the court stated that the public probably considered the compilation of several elements distinctive if, in the light of the existing product environment, they have been randomly chosen and differ from other product designs through recurrent and therefore identifying features.

The Federal Supreme Court considered the shape of the cheese product in question a characteristic composition not relating to the function or purpose of the product. It found that the relevant public would distinguish the product by its shape from those of other manufacturers. In contrast to the Patent Court, the Supreme Court decided that the option of cutting the cheese product into identical parts is not inherent in the product and therefore did not qualify the indentations as purely functional.

The Supreme Court therefore set aside the decision of the Federal Patent Court and sent the case back to the Federal Patent Court for further consideration. The court stated that the Federal Patent Court should reconsider the case, taking into account that the absolute grounds for excluding registration under s.8(2)(3) of the

Trade Mark Act are the same as for Art.6 quinquies subpara.B(1)(2). The Supreme Court emphasised that the Patent Court, especially in this context, would have to consider the issue as to whether a general public interest may exist in maintaining the availability of a variety of shapes for the products in question. If the claimed form is within the usual range of shapes of the particular type of goods and if there are limited options only to vary these shapes, the form might have to be kept free owing to the pertinent absolute exclusion ground of s.8(2) of the German Trade Mark Act correlating to Art.6 quinquies subpara.B-2 of the Paris Convention.

Comment: The decision of the Federal Supreme Court clearly states that the criteria for consideration of the distinctiveness of depictions of goods must not be exaggerated. It should usually be sufficient for the creation of distinctiveness that the trade mark is not just composed of elements that are functional or decorative.

The decision of the Federal Supreme Court follows the jurisdiction of the European Court of Justice (judgment of April 8, 2003 C-53/01, C-54/01 and C-55/01 Linde, Winward and Rado). The European Court of Justice clearly stated in that decision that three-dimensional trade marks consisting of the form of the product are not to be subjected to stricter criteria than other types of trade marks. Taking that decision into account, the Supreme Court could not have decided otherwise. In consequence it may be expected that the practice of trade mark registration in Germany will be generally adjusted to such rulings. It therefore should become easier to have three-dimensional trade marks registered.

Trade mark applicants for three-dimensional trade marks should therefore make sure that they refer to more than only technically necessary elements. Additionally they have to respect the public interest in a free variety of shapes to the same extent as this is true in respect of two-dimensional trade marks.

European Intellectual Property Review

2005 Article

TRIPS AND PROTECTION OF TRADITIONAL KNOWLEDGE OF GENETIC RESOURCES: NEW CHALLENGES TO THE PATENTS SYSTEM

N.S. Gopalakrishnan.

Article 27 of the TRIPs Agreement mandates patent protection for all new products and processes generated using any field of technology. [FN1] This applies to products and processes developed under new techniques of biotechnology. Since there was a considerable difference of opinion among members regarding the specific nature of the obligation, a temporary provision was agreed on in this regard. [FN2] Thus Art.27.3(b), introduced with special reference to inventions based on genetic resources, envisages different modes of protection. [FN3] While some items such as plants and animals are excluded from all form of protection, there is an obligation to provide patent protection for micro-organisms and an option for a sui generis form of protection for new plant varieties.

While implementing the obligations under this Article, some countries, particularly developing countries rich in genetic resources, identified many problems. The most important is the conflict between the obligation under Art.27.3(b) of TRIPs and the protection of traditional knowledge ("TK") associated with genetic resources under the Convention on Biological Diversity ("CBD"). [FN4] The obligation to protect and preserve the TK associated with genetic resources and to reward the holders of TK expressly emerges from Art.8(j) of the CBD. [FN5] Even though it is expressly stated in the CBD [FN6] that the implementation of the obligations under IPR should not run counter to the objectives of the Convention, many countries could not find solutions to the conflicts that emerged out of TRIPs and CBD.

It is the extension of patent system to afford protection to the new products of biotechnology that has created much controversy. The much-debated US patents for "turmeric" and "basmathi" are clear instances of the possibility of granting patents to products based on existing knowledge rather than new knowledge, as envisaged in TRIPs. [FN7] Though the patent system offers possibilities for the revocation of such patents, [FN8] it still throws open many questions about the limitation of the patent system to prevent the patenting of existing knowledge particularly when it involves products based on TK of genetic resources. The absence of a binding obligation under the patent law to share benefits arising out of the use of TK in the new inventions that are protected through patents is another issue that causes concern. This assumes much significance in the context of technology-rich countries such as the United States refusing to join CBD.

During the review of Art.27.3(b) many developing countries recognised the conflict and demanded that there should be express provisions in the TRIPs Agreement to prevent the grant of patents to existing TK and the sharing of benefits derived from the patents granted to new inventions based on TK. [FN9] There were strong oppositions to this from the developed countries, arguing that there is no conflict and the existing provisions in the patent law are adequate to tackle the problem. [FN10] According to these countries it is the absence of proper documentation of TK that created the problem since ***12** the patent office could not do a proper prior art search to find out the existence of such knowledge. While considering the issues on implementation of existing TRIPs obligations, the WTO ministerial meeting at Doha requested the TRIPs Council to look into the interrelation between Art.27.3(b) and the CBD. [FN11]

One of the important suggestions made by many developing countries in the TRIPs Council is to provide express provisions in the TRIPs stipulating the disclosure of the information in the patent specification, including the origin of the genetic resources and the TK associated with them. [FN12] Many developed counties, particularly the United States, argued that this would amount to insisting of new conditions for the grant of patent protection that was not envisaged in Art.27. [FN13] The EU, while agreeing to the need for disclosure of information, joined with the United States and argued that it should not be made a condition precedent for grant of patent and its validity. [FN14] According to these countries, since there are many practical problems in identifying the source and geographical origin of genetic resources this should not be insisted on. But the developing countries further argued for the need to produce the evidence for taking prior informed consent from the holders of TK along with the patent application. According to them this would ensure the enforcement of the sharing of benefit under CBD. The developed countries countered this, stating that it could be achieved through contractual agreements that deal with material transfer and should not be linked with patents. [FN15]

This article examines these issues and argues that there is a need to work out new norms in the patent system to tackle the new challenges.

JUSTIFICATION FOR THE DISCLOSURE OF THE SOURCE

The significant factor to be noted in case of the patenting of new products of biotechnology is the interaction of two different knowledge systems. It is the application of new techniques of biotechnology to the TK base of genetic resources that results in the development of new products of biotechnology. [FN16] It need not be emphasised that modern biotechnology is the outcome of the Western teaching of science and technology originating out of the industrial revolution. Western science has also developed its own terminology, logic and mode of expressions of such knowledge in written form.

In the case of TK associated with genetic resources, the acquisition of this knowledge is different from that of Western science in the sense that it has its own terminology, logic and mode of expression. The best examples are the traditional medicinal practices of India such as Ayurveda, Uniani and Siddha. In many cases the TK on genetic resources is still based on oral tradition. In these cases it is only the persons holding the knowledge who are in a position to explain the nature and extent of the knowledge in the local language based on traditional teaching. Even in cases where it is documented it is based on traditional teaching and in some cases in the local language in its earlier form. There may be translations of this in different languages including English. [FN17] Still, it is only persons trained in that field who are capable of appreciating the nature and content of the knowledge involved. It is this difference between Western science and TK that in many cases has created problems when patent law is employed to protect the new products of biotechnology.

The present system of patenting, right from its concepts, procedure etc., was evolved to suit the methodology of Western science. [FN18] The concept of novelty, prior art, inventive step, etc., also emerged from Western scientific thinking. It is pertinent to note that the methods employed to find out whether the invention is in the public domain or not are also the outcome of the technological and industrial needs of Western society. [FN19]

It is the current law that the novelty of the invention is lost if the claimed new knowledge in the invention is already published or used before the filing of the patent application. [FN20] It is the practice of “prior art search” ***13** undertaken by the patent office that enables the establishment of prior publication. The published documents in the form of patent specifications and other scientific literature largely based on Western science in the relevant area are consulted for this purpose. For practical reasons the patent offices of some countries however, do not make any inquiry into prior use. It is during the opposition or revocation proceedings that this condition is invoked for the purpose of preventing the grant of patent or to revoke the patent already granted. [FN21] In the United States the prior use inquiry is confined to the use within their territory alone. [FN22] This practice has the potential to facilitate the patenting of knowledge in the public domain. But the possibilities are fewer if the knowledge has already been documented by modern scientific methods. The option in such cases is to request revocation or re-examination of the patent by producing documentary evidence.

The modern methodology for the above inquiries is not suitable for the patenting of new products based on TK. The absence of documentation of the TK in many cases and the nature and language of disclosure even in cases where it is documented make the prior art search difficult. This situation sometimes results in the granting of patents to knowledge already in existence. The failure of some legal systems to recognise oral tradition and the demand for documented knowledge make the opposition or revocation proceedings extremely difficult and cumbersome. [FN23] This demands a new liberal disclosure scheme in cases of patent specification based on TK to ensure the credibility of the patent system. This will also prevent the abuse of the patent system by people claiming protection for public domain knowledge.

In the case of TK-related inventions the disclosure of the nature of the knowledge, location of the material and the name and details of the holder of the knowledge are very important to ascertain prior art. The local language in which it is described, the way in which it is understood and practised, etc., are also very important in finding out prior art. The disclosure of this information assumes much importance in cases where the TK used in the new invention is undocumented or documented in a local language or based on oral tradition. It goes without saying that it is the patent applicant who is in a better position to disclose this information since he is involved in the research of finding out the new products based on it. The researcher collects a large amount of data, published and unpublished, regarding the prior art to add value to it. If the information is not published this has to be collected through personal interviews and fieldwork. In this context it is meaningless to argue that disclosure of this information is an additional burden on the part of the modern inventor.

It is through judicial intervention initially that the criterion of inventive step or non-obviousness was introduced into the patent system [FN24] though later it got incorporated into the statute. [FN25] The method employed is the examination of the disclosure of the new knowledge in the patent specification to find out whether the claimed invention involved the application of the inventive faculty or not. It is now well established that the reference point for the examination is the “person skilled in the art”. [FN26] In this context the recent observation of US Court of Appeal for the Federal Circuit in re Berg [FN27] is worth quoting:

“As persons of scientific competence in the fields in which they work, examiners and administrative patent judges of the Board of Patent Appeals are responsible for making findings, informed by their scientific knowledge, as to the meaning of prior art reference to persons of ordinary skill in the art and the motivation those references would provide to such persons. Absent legal error or contrary factual evidence, those findings can establish a prima facie case of obviousness.” [FN28]

That means that the assumed person is one who has a scientific training in the relevant area also of recent developments. If the patent examiner is not knowledgeable he is expected to consult a person trained in the art. This yields results in the modern patent system since the inventions are based on modern scientific developments and the patent examiners being trained in this science develop sufficient expertise to find out the inventive step.

In patent cases involving TK it appears that patent examiners come across problems since they have no training in the relevant art. In many cases it is beyond their competence. In the case of inventions based on TK it is the holder of the knowledge who is the person skilled in the art given the nature and content of TK and its difference from modern science and technology. So, for the purpose of identifying the person skilled in the art to find out the inventive step, it is absolutely necessary that the disclosure of prior art in the patent specification must have the details of the existing information (documented or oral), the location of the genetic material and the holder of the TK. It is also important to note that only persons who have an understanding of the relevant TK could analyse the prior art ***14** and find out whether the new invention involves an inventive step or not. The correct appreciation of the obvious nature of the knowledge deriving from the TK may not be possible if examination of the obvious nature is done without the assistance of the TK holder. [FN29]

It is well accepted that what is obvious in one knowledge system need not necessarily be so with respect to another system. So it is important that when the patent application is examined to find out inventive step the TK holder is also involved. This can be achieved if the patent application containing the TK reference is referred to the country of origin of the TK and the services of the experts in TK in the country along with the TK holders are used. This can be achieved practically either through national patent offices or government-recognised specialised agencies having the necessary documentation and experts in the field of the relevant TK. Countries rich in TK associated with genetic resources have to immediately initiate steps to put in place an institutional framework to undertake this task within the minimum stipulated time to avoid unnecessary delay. This includes the creation of databases of published TK, lists of holders of such knowledge, scientific experts working in the field, etc. Eventually the PCT examination system could also be utilised. These institutions could be recognised as international searching and examining authorities for the purpose of the search and examination of TK-related patents.

Disclosure also plays a significant role in dealing with applications requesting the opposition of grant of patent and revocation of the patents. Opposition proceedings are followed in many countries to further ensure that knowledge in the public domain is not patented. The content of the disclosure in the patent specification gives necessary information for the purpose of finding out whether the invention satisfies the requirement of patentability. In the case of TK the new disclosure system is needed for the purpose of effectively opposing the patent application on the grounds of lack of novelty and inventive step to prevent TK from being patented. It is only from the holders of knowledge that the relevant information could be collected for opposition or revocation.

One of the celebrated objectives of the patent system is to facilitate the progress of science and learning. Disclosure helps the patent system to achieve this objective. Inadequate disclosure can defeat the whole objective of the patent system. So the additional information is significant to enable a person to do further research on the new invention based on TK and also to work the invention after the monopoly period is over. Hence for the purpose of maintaining a credible patent system it is important that these items of information are included in the patent application that contains the reference to TK. In this context the request for mandatory disclosure is not a new or additional condition but a necessary requirement when the new product or process is the outcome of new technology in interaction with a different knowledge system which is equally credible and sustainable.

It is evident from the historical development of the patent system that the requirement of disclosure was not mandatory during the early period of the system. [FN30] The nature and content of disclosure in the patent application evolved out of necessity to maintain a credible patent system. Changes were introduced either through judicial [FN31] or legislative intervention depending on the stages of development of new technology and industrial growth. [FN32] Hence in the context of biotechnology's interaction with science and TK it is only logical that we should introduce necessary disclosure requirements to maintain the credibility of the patent system. The conceptual or structural differences between the TK system and the ways and means of Western science should not inhibit us from requiring disclosure for making the patent system credible.

Justification for insisting on prior informed consent

The patenting of new products of biotechnology based on TK creates another problem in the context of the CBD. It is now well accepted that genetic resources and knowledge associated with them is property to be recognised and protected by nations. [FN33] It is true that the content of the rights and the mode of protection are left to countries themselves, given the complexities involved in affording protection to TK. It is an accepted fact that TK is not static but an evolving system. There is continuous value addition taking place at every stage of its development and hence it is surviving as a valuable knowledge system. [FN34] It is also recognised that local and indigenous people are responsible for this value addition and its sustenance. It is these factors that make TK property similar to any other form of intellectual property. The major difference is that the ownership of this form of property in many cases is collectively enjoyed. This means that such a knowledge system is to be kept as an "open system" to be used and innovated for its ***15** continued evolution on an implied social understanding that the users are not going to misappropriate the knowledge into private property for commercial benefits. Even in cases where it was kept in secret by a few members of the society there was an implied social understanding that it had to be used for social benefit. So it is logical that the rights of the community are respected before anyone enjoys the benefits deriving from the utilisation of their knowledge system. In this context the fact that tradition allowed the TK holders to keep the knowledge system open to be freely enjoyed and innovated by the members of society should not be used as an argument by modern commercial establishments to misappropriate and convert it into private property using patent law without their permission.

The patenting of new products of biotechnology based on TK includes the patenting of certain elements of genetic resources and the knowledge associated with them. This means the enjoyment of the property of the community without permission by the patent owner utilising the provisions of patent law. This is the reason why Art.8(j) of the CBD obligates that prior informed consent of the community must be obtained before utilising their knowledge system. If one of the objectives of patent law is to prevent the enjoyment of the protected knowledge of one person by another without permission, prior informed consent from the holders of TK must be insisted on before granting a patent for a product based on TK.

It is clear from Art.8(j) [FN35] of the CBD that the obligations include not only the sharing of benefits but also involvement and participation of the holder of TK in the case of innovations and utilisation of their knowledge. It is evident from the cases that community participation is a pre-requisite for the purpose of developing new products based also on TK that is undisclosed and undocumented. The best example is the development of "Jeevani" from "Arogyappacha". [FN36] The information given by the holders of the knowledge acts as a lead for developing the new product. In this sense there is effective interaction between holders of two knowledge systems for the development of the new product to claim patent protection. It is true that in some cases the new product may be different from the one practised by the community. But the important factor is that it is the basic information provided by the community that has enabled the modern scientist to develop the new product. It is the sharing of this information that has given the community the right to claim benefit deriving from the patent system utilising their knowledge base. In this sense the TK holder acts, in a limited sense, as a "co-inventor" of the new product, sharing his knowledge albeit in a crude form viewed from the perspective of modern science and the patent system. This envisages in appropriate cases even joint ownership of patents for the new product developed out this interaction. It is the failure of the patent system to recognise this fact that prevents the TK holder from enjoying, directly or indirectly, the benefits of the patent system. He could have direct benefit if he were treated as a co-inventor. And he could derive benefit indirectly through a benefit-sharing arrangement if he could not be treated as co-inventor. The trend we have noticed is to take the patent in the name of the holder of the modern knowledge system, completely ignoring the role played by the holder of TK in value addition. In this scenario the credibility of a patent system will depend on the ways in which it ensures that the TK holder gets his due share.

One of the objectives of the patent system is to encourage creativity by providing economic and other incentives for the creator of the new knowledge. This is achieved by the patent system by granting patent to the "true and first inventor", i.e. to the person or persons who intellectually contributed to the development of new inventions. In some legal systems this is achieved by insisting that the patent application must be filed by the inventor and not by the assignees except in exceptional circumstances. [FN37] Other legal systems facilitate the assignees to file the patent application with the consent of the actual inventor. In such cases the application must contain the name of the inventor and evidence to show that his consent is obtained for filing the application. [FN38] In the case of more than one inventor the same procedure is also followed. This is to ensure that the persons who actually developed the invention get an opportunity to claim their share of the benefit arising out of the commercial utilisation of their intellectual labour through the patent system. It appears that this broad objective of the patent law will be defeated if the evidence of prior informed consent of holders of TK is not insisted on. along with the patent application in the case of new products of genetic resources. Because holders of TK are also innovators, since TK is an evolving system and their knowledge acts as lead for the development of new product, it is only logical to treat them as a party, directly or indirectly, to the new product developed using a different system of knowledge. The fact that the TK holder follows a different knowledge system should not act as a bar to enjoying the benefits of a patent system that encourages creativity. If the innovators based on Western science and technology recognise TK as valuable information in the development of a new product, it is essential to find out the best possible way of protecting this knowledge to prevent exploitation. It is well accepted that holders of TK are weak parties in the bargain and it is only fair if we introduce a system that protects the interest of the ***16** weaker parties. The obligation to provide for the evidence of prior informed consent along with the patent application will ensure to a large extent that the weaker party is not exploited. It is this philosophy that obligates the assignee to produce evidence of assignment in the case of a patent application filed by an assignee. In this context, insisting on the production of the evidence of prior informed consent is an essential requirement for achieving the objectives of patent law. This seems to be the best method of linking the innovators of different systems and the recognition of value addition by them in the process of integration of the systems to produce new knowledge. This will also facilitate the process of treating TK as a credible knowledge system and the TK holder as an innovator.

Limitations of using contract law or separate legislation

In the light of the CBD there are forceful arguments advanced for using separate law or contract law for achieving prior informed consent ("PIC") and not to link the CBD obligations with TRIPs. [FN39] It is true that it may be possible to achieve this within a country. But then the problem is creating an international binding obligation to legislate on PIC and benefit sharing. To achieve international compliance with PIC, all the contracting parties must have legislation to mandate PIC whether it is from their own territory or from the territory of Member States. The domestic law must not only prohibit the use of genetic resources and TK associated with them within an individual territory without PIC but also prohibit the use of genetic resources and TK associated with them within the Member States without PIC from that country. This alone will enable the TK holder, though with difficulty, to take action against misappropriation of the TK without permission by a foreigner and use it in his country. There are no rules for preventing this. Many countries which do not have genetic resources are refusing to legislate. Even in cases where there is legislation it does not contain any provision to prohibit the use of genetic resources from Member States without PIC. This is clear from the Biological Diversity Act 2002 of India. The Indian law prohibits access to Indian genetic resources and TK without prior informed consent by foreigners. [FN40] But if they are accessed without permission and used in another country the Indian TK holder will not be in a position to take effective action in that country in the absence of similar legislation. Similarly, it may not be possible to enforce a court order from India prohibiting the use of such genetic resources in another country in violation of the Indian Biodiversity Law. This is not to say that foreign judgments are not enforceable. But it is difficult to enforce a foreign judgment for an act that is not prohibited in the country in which it is to be enforced. [FN41] In this context one needs to be realistic about the effectiveness of this mechanism. Even though Indian law prohibits the use of Indian genetic resources and TK associated with them without PIC there is no similar provision preventing an Indian or foreigner in India using the genetic resources and TK associated with them from another member country without their permission. [FN42] There is also no obligation to obtain PIC by the Indian or foreign patent applicant if the genetic resource is from outside India. [FN43] This will enable an Indian or a foreigner in India to bypass the biodiversity law of another country and enjoy the benefit of commercial utilisation of their TK without having to enter into any contractual obligation for benefit sharing. It is to be remembered that there is no mechanism under the CBD to enforce such an obligation in the case of failure by Member States. In addition to this it is also important to note that many countries including the United States refused to join the CBD. In such cases there is no obligation to enact a law or enforce a contractual obligation. The technology-rich United States will continue with bio-piracy without any obligation to respect the biodiversity law of another nation. Unlike other forms of theft it is well accepted that it is very difficult to prevent the theft of genetic materials from a country. If the industry in the United States uses Indian genetic resources and TK associated with them, violating Indian biodiversity law, it is worth examining what options the Indian TK holder has to force the US industry to enter into PIC. It is clear that he cannot file a case in the United States for violation of the Indian law. Nor is there a law in the United States mandating contractual obligation to obtain PIC to file a case in the United States for violation. Assuming that the TK holder gets a judgment against the US industry from the Indian courts, obligating them to obtain PIC, it may not be possible to enforce it in the United States since there is no obligation under US law to do this. In this context it is not a good argument to advance that contractual obligations or separate legislation can effectively enforce the CBD obligations. The only option is to link it with TRIPs obligations.

***17** It appears that it is this philosophy that is reflected in Art.16(4) [FN44] of the CBD when it obligates the Member States implementing the intellectual property laws to “ensure that such rights are supportive of and do not run counter to its objectives”. If one is realistic about achieving the interrelationship between TRIPs and the CBD, prior informed consent and disclosure must form part of the obligation of the patent application for new products based on genetic resources and the TK associated with them. This can be achieved by introducing amendments/clarifications to Art.29(1) of the TRIPs Agreement. [FN45]

Indian Patent Act and its interrelationship with the CBD

For the purpose of protecting TK associated with genetic resources, the Indian Parliament took many positive and bold steps in the Amendments introduced to the Patent Act in 1999 and 2002. To prevent patenting of TK in India it is expressly stated in s.3 of the Act that TK is not an invention. [FN46] Similarly there is an express ban on granting Exclusive Marketing Rights to the Indian system of medicine available in the public domain. [FN47] To make this a reality a new provision was added to the grounds of opposition and revocation regarding the prior art of TK. According to this provision, the knowledge available within local and indigenous communities, oral or otherwise and within India or elsewhere, will be treated as prior art. [FN48] Thus it is significant to note that oral knowledge within communities is recognised as valid for the purpose of considering prior art. This bold step is required to ensure that the vast undocumented knowledge of Indian local and indigenous communities is kept out of the patent system.

Another amendment introduced concerns disclosure. To find out whether TK is included in the invention relating to generic resources, it is made obligatory that the applicant must disclose the source and geographical origin of the biological material in the specification. [FN49] It is clear that the obligation is to provide not only the details of the source from which the material is obtained but also the geographical origin, i.e. the country of origin of such material. It appears that these two conditions are included in consideration of the fact that a large number of biological materials are collected and conserved by individuals and institutions inside and outside India. This is invariably outside the geographical place where the material originated. The information regarding the source will necessarily include the details of the person or institution from whom the material is obtained and the details of the information regarding the material. Even though it is not expressly stated that the details of the TK associated with the material and its holder must be disclosed, it is implied that this information must form a part since one of the purposes of disclosure in the specification is to enable the patent office to find out the prior art and inventive step. This is evident from the fact that this requirement is part of the technical details to be included in the specification. [FN50] To make this provision effective it is made clear that the patent application can be opposed or revoked if the information is not given or wrongly mentioned. [FN51] It is obvious that this obligation is one of good faith. There may not be much problem in disclosing the information regarding the source since the applicant has to obtain it from someone who is in possession of the material and the details regarding such material. There may be a problem in some cases with the geographical origin of the material. This is particularly so in the case of materials that have crossed borders and have been preserved in gene banks with insufficient details. But if the applicant makes a reasonable effort to find out the information and disclose it in good faith, the application cannot be rejected or revoked on the ground of wrong disclosure. These provisions make it very clear that, even though TK associated with genetic resources that are available and known to communities cannot be patented, any new invention based on it is eligible for patent protection. The inclusion of microorganisms for patent protection is a clear indication in this regard. [FN52]

It is unfortunate to note that there is no provision in the Patent Act making it obligatory on the part of the patent applicant for inventions based on TK to obtain PIC to use the TK and share the benefits derived out of such use before filing a patent application. It is worth mentioning that the Biological Diversity Act, 2002 has a provision making it obligatory on the part of the patent applicant for an invention based on genetic materials of Indian origin to obtain PIC from the National ***18** Biodiversity Authority. [FN53] This has to be obtained before the grant of patent. The failure to obtain PIC or satisfy the conditions stipulated in the PIC is actionable under the Act. [FN54] But this has no impact on the grant of patent or enjoyment of the patent rights. There is no obligation under the Biodiversity Act or under the Patent Act to produce the PIC in the Patent Office before grant of patent, nor is there a provision to oppose or revoke the patent on the ground of failure to produce the PIC or satisfy the conditions stated in the PIC. This makes the provision meaningless. Since India from the very beginning has been arguing in the TRIPs Council that this obligation must be built into TRIPs to prevent the conflict between TRIPs and the CBD, it is reasonable that we include this in our Act at the earliest. It is, however, disappointing to note that even the Patent (Amendment) Bill 2003 [FN55] recently introduced in parliament does not carry this provision.

In the context of facilitating the patenting of biotech inventions in India there is an urgent need to equip the Indian Patent Office with the necessary documentation and experts to examine these applications and ensure that India is not going to repeat the mistake USPTO committed in case of the “turmeric” and “basmathi” patents. At present the patent examiners are not experts in TK associated with genetic resources. It may not be possible for the office to find such persons in all the fields. So it is necessary that the Indian Patent Office develop institutional links with institutions having documentation and experts in the field of TK. [FN56] The office must also develop elaborate guidelines to be followed in the examination of patent applications linked to TK to find out prior art and inventive step. It is unnecessary to emphasise the importance of associating the TK holders with this endeavour. Only then can we effectively prevent the conversion of the TK of local and indigenous communities into the private property of a few modern scientists and corporations using biotechnology and patent law.

<u>FOOT NOTES</u>

FN1. Art.27(1) reads: “Subject to the provisions of paragraphs 2 and 3, patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application. 5 Subject to paragraph 4 of Article 65, paragraph 8 of Article 70 and paragraph 3 of this Article, patents shall be available and patent rights enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced.”

FN2. See Terence P. Stewart (ed.), The GATT Uruguay Round—A Negotiating History (1986-1994) Vol. IV: The End Game (Part I) (Kluwer Law, 1999), pp.530- 533.

FN3. Art.27(3)(b) reads: “(b) plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes. However, Members shall provide for the protection of plant varieties either by patents or by an effective sui generis system or by any combination thereof. The provisions of this subparagraph shall be reviewed four years after the date of entry into force of the WTO Agreement.”

FN4. For an earlier view see N. S. Gopalakrishnan, “Diversity Related Intellectual Property Rights: GATT Final Act, The Convention on Biological Diversity and the Challenges” (1994) 18 Academy Law Review 263 and “Biotechnology and Intellectual Property Protection” (1995) 19 Academy Law Review 1.

FN5. Art.8(j) reads: “ ... Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovation and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices”. For a detailed analysis see N. S. Gopalakrishnan, ibid.

FN6. Art.16(5) reads: "The contracting parties, recognizing that patent and other intellectual property rights may have an influence on the implementation of this Convention shall cooperate in this regard subject to national legislation and international law in order to ensure that such rights are supportive of and do not run counter to its objectives."

FN7. For details see Siddhartha Prakash, "Trade and Development Case Studies: Country Studies: India", Trade and Development Centre, www.itd.org/issues/india6.htm#Turmeric; and Graham Dutfield, "Is novelty still required for patents in the United States: the case of turmeric", Bulletin of the Working Group on Traditional Resource Rights, p.4. On the issue of questionable patents in the field of biotechnology see Federal Trade Commission, To Promote Innovation: The Proper Balance of Competetion and Patent Law and Policy, A report by the Federal Trade Commission (October 2003), Ch.3 at pp.15-29.

FN8. See s.64 of the Indian Patent Act 1970 on revocation of patents and ss.301-307of U.S.C on re-examination of patents.

FN9. For details see IP/C/M/24 dated August 17, 1999; IP/C/W/163 dated November 8, 1999; IP/C/W/195 dated July 12, 2000; IP/C/W/206 dated September 20, 2000.

FN10. For details see IP/C/W/162 dated October 29, 1999; IP/C/W/209 dated October 3, 2000; IP/C/W/254 dated June 13, 2001. See also Nuno Piews de Carvalho, The TRIPS Regime of Patent Rights (Kluwer Law International, 2002), pp.177-208.

FN11. Para.19 of the Doha Declaration reads: "We instruct the Council for TRIPS, in pursuing its work programme including under the review of Article 27.3(b), the review of the implementation of the TRIPS Agreement under Article 71.1 and the work foreseen pursuant to paragraph 12 of this Declaration, to examine, inter alia, the relationship between the TRIPS Agreement and the Convention on Biological Diversity, the protection of traditional knowledge and folklore, and other relevant new developments raised by Members pursuant to Article 71.1. In undertaking this work, the TRIPS Council shall be guided by the objectives and principles set out in Articles 7 and 8 of the TRIPS Agreement and shall take fully into account the development dimension". See WT/MIN(01)/DEC/1 dated November 20, 2002.

FN12. For details see the representations made by India and Asian and African countries, IP/C/W/195 dated July 12, 2000; IP/C/W/356 dated June 24, 2004; IP/C/W/350 dated June 26, 2002.

FN13. See for details IP/C/W/257 dated June 1113, 2001; IP/C/W/341 dated March 25, 2002; IP/C/W/393 dated January 28, 2003.

FN14. See for details IP/C/W/383 dated October 17, 2002; WT/CET/W/223 dated February 14, 2003.

FN15. For a summary of the different views expressed by countries see Note, "The Relationship between the TRIPS Agreement and the Convention on Biological Diversity", Council for TRIPs, JOB(02)/58 dated June 18, 2002.

FN16. For example see the development of "Jeevani" from the knowledge of "Arogyapacha" held by the Kani Tribes in Kerala. For details see Pushpangadan et al., "Further Studies on the Pharmacology of Tricoipuszeylanicus" (1995) 14/3 Ancient Science of Life 127-135; see also WIPO Case Study, "Value addition to local Kani Tribal Knowledge: Patenting, licensing and benefit sharing", WIPO, Geneva, 2002 and footnotes thereof, and Timothy M. Swanson (ed.), Intellectual property rights and biodiversity conservation: an interdisciplinary analysis of the values of medicinal plants (Cambridge University Press, 1995); E. J. DaSilva et al. (ed.), Biotechnology: economic and social aspects, Issues for developing counties, (Cambridge University Press, 1992).

FN17. For example the Traditional Knowledge Digital Library ("TKDL") Project of CSIR, New Delhi.

FN18. For a detailed discussion of the historical development of patent system see Macleod, Inventing the Industrial Revolution: The English Patent System, 1660-1800 (1989).

FN19. See generally, H. Dutton, The Patent System and Inventive Activity during the Industrial Revolution 1750-1852 (Manchester University Press, 1984). For a brief analysis, see Brad Sherman and Lionel Bently, The Making of Modern Intellectual Property Law: The British Experience, 1760-1911 (Cambridge University Press, 1999), pp.101-110.

FN20. See s.13 of Indian Patent Act, 1970; s.102, 35 U.S.C and s.2 of UK Patent Act 1977.

FN21. See ss.24(5) and 65(6) of the Indian Patent Act, 1970 and s.72 of UK Patent Act 1977.

FN22. See s.102, 35 U.S.C., which reads: "A person shall be entitled to a patent unless (a) the invention was known or used by others in this country ... " (emphasis added); see also Westinghouse Machine Co v General Electric Co 207 F. 75 (2d. Cir.1913).

FN23. This is evident from the difficulties India faced during the re-examination proceedings of the "turmeric patent". For details see Prakash, n.7 above.

FN24. See Hotchkiss v Greenwood 52 U.S. 248 (1851); Collar Co v Van Deusen 90 U.S. (23 Wall.) 530 (1875); American Braided Wire Co v Thompson (1889) 6 R.P.C. 518; Gadd and Mason v May of Manchseter [1892] 9 R.P.C. 516.

FN25. See s.2(j) and (ja) of the Indian Patent Act and s.103 of the U.S.C. and s.3 of UK Patent Act.

FN26. The test laid down in Windsurfing International v Tabur Marine [1985] R.P.C. 59, CA reads: "The first is to identify the inventive concept embodied in the patent in suit. Thereafter, the court has to assume the mantle of the normally skilled but unimaginative addressee in the art at the priority date and to impute to him what was, at that date, common general knowledge in the art in question. The third step is to identify what, if any, differences exist between matter cited as being 'known or used' and the alleged invention. Finally, the court has to ask itself whether, viewed without any knowledge of the alleged invention, those differences constitute steps which would have been obvious to the skilled man or whether they require any degree of invention." See also Graham v John Deere Co 383 U.S. 1 (1966).

FN27. Re Richard A. Berg, Paul D. Toman and Donald G. Wallace 320 F. 3d 1310 (2003); 65 U.S.P.Q. 2d (BNA) 2003.

FN28. ibid. at 1316.

FN29. For a brief discussion see N. S. Gopalakrishnan, CD on WIPO Asia-Pacific Seminar on Intellectual Property Genetic Resources, Traditional Knowledge and Folklore, November 11-13, 2002, Cochin, India, Cochin University of Science & Technology , 2002 Disc 2

FN30. See D. Seabrone Davies, "The Early History of the Patent Specification" (1934) 50 L.Q.R. 86; E. Wyndham Hulme, "On the consideration of the Patent Grant, Past and Present" (1897) 13 L.Q.R. 313.

FN31. Lord Mansfield observed: "For the condition of giving encouragement is this; that you must specify upon record your invention in such a way as shall teach an artist, when your term is out, to make it—and to make it as well as you by your directions; for then at the end of the term, the public have the benefit of it. The inventor has the benefit during the term and the public have the benefit after." See Liardet v Johnson, Morning Post, February 23, 1778 (No.1667, p.2 col.4 K.B) extracted in 18 L.Q.R 280 at p.285.

FN32. See s.10(4) of Indian Patent Act, 1970; s.112, 35 U.S.C. For details of the development in the United States see Chisum on Patents (2001), Vol.3. Ch.7, LexisNexis.

FN33. Art.15(1) reads: "Recognizing the sovereign rights of States over their natural resources, the authority to determine access to genetic resources rests with the national government and is subject to national legislation."

FN34. For details see WIPO, Intellectual Property Needs and Expectations of Traditional Knowledge Holders, (WIPO, Geneva, 2001).

FN35. Art.8(j) reads: " ... Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovation and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practice".

FN36. For details see n.16 above and R. V. Anuradha, "Mainstreaming Indigenous Knowledge into Jeevani", Economic and Political Weekly, June 27, 1998, p.1615.

FN37. For example see ss.111 and 118 of 35 U.S.C.

FN38. See s.7 of Indian Patent Act, 1970 and Rule 11 read with Form 1 and Form 5.

FN39. See the arguments of the United States in the TRIPs Council, IP/C/W///257 June 2001.

FN40. 1. See s.3(1), which reads: "No person referred to in subsection (2) shall without previous approval of the National Biodiversity Authority obtain any biological resource occurring in India or knowledge associated thereto for research or for commercial utilization or for bio-survey and bio-utilisation" (emphasis added).

FN41. The observation of the Indian Supreme Court in Smt. Satya v Teja Singh, A.I.R. 1975 S.C. 105, refusing to enforce a foreign judgment on divorce, is worth quoting. Chandrachud J. observed: "It is thus a truism to say that whether it is a problem of municipal law or of Conflict of Laws, every case which comes before an Indian court must be decided in accordance with Indian Law. It is another matter that the Indian conflict of laws may require that the law of a foreign country ought to be applied in a given situation for deciding a case which conatains a foreign element. Such a recognition is accorded not as an act of courtesy but on consideration of justice. It is implict in that process that the foreign law must not offend against our public policy"; ibid. at 108 (emphasis added); see also Joao Gloria Pires v Mrs Ana Joaquina Rodrigues e Pires, A.I.R 1967 Goa 113.

FN42. See n.40 above.

FN43. s.6(1) reads: "No person shall apply for any intellectual property right, by whatever name called, in or outside Indian for any invention based on any research or information on a biological resource obtained from India without obtaining the previous approval of the National Biodiversity Authority before making such application" (emphasis added).

FN44. Art.16(5) reads: "The contracting parties, recognising that patent and other intellectual property rights may have an influence on the implementation of this Convention shall cooperate in this regard subject to national legislation and international law in order to ensure that such rights are supportive of and do not run counter to its objectives."

FN45. Art.29 (1) reads: "Members shall require that an applicant for a patent shall disclose the invention in a manner sufficiently clear and complete for the invention to be carried out by a person skilled in the art and may require the applicant to indicate the best mode for carrying out the invention known to the inventor at the filing date or, where priority is claimed, at the priority date of the application."

FN46. s.3(p) reads: " ... an invention which, in effect, is traditional knowledge or which is an aggregation or duplication of known properties of traditionally known component or components".

FN47. s.24A(3), Explanation, reads: "It is hereby clarified that for the purpose of this section, the exclusive right to sell or distribute any article or substance under this section shall not include an article or substance based on the system of Indian medicine as defined in clause (e) of sub-section (1) of section 2 of the Indian Medicine Central Council Act, 1970 (48 of 1970) and such article or substance is already in the public domain."

FN48. ss.25(k) and 64(q) read: " ... that the invention so far as claimed in any claim of the complete specification is anticipated having regard to the knowledge, oral or otherwise, available within any local or indigenous communities in India or elsewhere".

FN49. s.10(4)(d)(D) reads: " ... disclose the source and geographical origin of the biological material in the specification, when used in an invention".

FN50. s.10(4)(d) reads: " ... be accompanied by an abstract to provide technical information on the invention".

FN51. ss.25(j) and 64(p) read: " ... the complete specification does not disclose or wrongly mentions the source or geographical origin of biological material used for the invention".

FN52. s.3(j) reads: " ... plants and animals in whole or any part thereof other than microorganism but including seeds, varieties and species and essentially biological process for production or propagation of plants and animals" (emphasis added).

FN53. s.6 proviso reads: "Provided that if a person applies for a patent, permission of the National Biodiversity Authority may be obtained after the acceptance of the patent but before the sealing of the patent by the patent authority concerned: Provided further that the National Biodiversity Authority shall dispose of the application for permission made to it within a period of ninety days from the date of receipt thereof."

FN54. s.55 reads: "Whoever contravenes or attempt to contravene or abets the contravention of the provisions of section 3 or section 4 or section 6 shall be punishable with imprisonment for a term which may extend to five years, or with fine which may extend to ten lakh rupees and where the damage caused exceeds ten lakh rupees such fine may commensurate with the damage caused, or with both".

FN55. The Patent (Amendment) Bill 2003, Bill 92 of 2003 introduced in Lok Sabha on December 22, 2003.

FN56. For example CSIR, New Delhi, has developed the TKDL on traditional medicines.

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A PRACTICAL APPROACH TO THE PROBLEM OF OPEN SOURCE AND SOFTWARE PATENTS

Mikko Valimaki

***523** The role of open source and free software development has become central in many infrastructural software projects. A great example is the internet, which has practically grown up on open source software. At the moment, popular open source products such as the GNU/ Linux operating system, Apache web server and several databases are also used increasingly within corporate networks. One could argue that open source forms perhaps the fastest growing and most innovative sector of the software industry today.

However, many individual software developers and small companies have warned that software patents threaten the functionality of the open source model. [FN1] Recent political campaigning around the EU's software patent directive proposal has increased fears that distributed open development is particularly vulnerable to patent monopolies. [FN2] Well-known open source developers including Linus Torvalds have expressed critical public opinions on software patents in general and the directive proposal in particular. [FN3] The critique has been mainly centred on economic arguments: extensive software patents may threaten software innovation. [FN4]

This Opinion reviews several suggestions to solve the patenting problem with open source development. These include patent pools for open source developers, aligning development more closely with the patenting process, solving the problem of trivial patents and introducing new liability exceptions to the patent law.

The Opinion concludes by arguing that in cases where patents and open source development have conflicts, the legal system should be improved in the first place. It would not be desirable to require open source development as a methodology to adopt abstract rules of law that may not be on a par with the software development reality. Therefore the liability exception policy might offer the best outcome for all.

OPEN SOURCE LICENCES AND PATENTS

Let us start from looking at the patenting problem from an open source licensing perspective. Software projects can be identified as open source when the software is licensed with an open source licence. [FN5] Open source licences can be further categorised into several groups. [FN6] From a patents perspective, the most important licences are the GNU General Public Licence (GPL) and the GNU Lesser General Public Licence (LGPL), which are also the most used open source licences. Both of these licences include a similar patent clause. [FN7] GPL cl.7 reads as follows:

"7. If, as a consequence ... of patent infringement ... conditions are imposed on you ... that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program."

The Preamble to the GPL explains the motivation behind this obligation:

"Any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all."

In short, the GNU GPL and LGPL have a built-in termination mechanism that does not allow the development of software that requires any kind of licence payments for third-party patents. In more technical wording, the GPL and LGPL are incompatible with patent licensing fees: if there is a ***524** patent for some software invention and that patent is not licensed for free to every (L)GPL user forever, it is not possible to develop free software for that invention.

Not all open source licences have such patent clauses. For instance the popular BSD licence lacks one.

However, patent clauses essentially similar to those of the GPL and LGPL are becoming more and more common. Almost all recent open source licences have such clauses. [FN8] Whatever one may think of the practicality of these kinds of termination clauses, it seems clear that open source development becomes problematic indeed if there are many existing software patents around.

OPEN SOURCE DEVELOPMENT PROCESS

From a development perspective, open source and free software are ambiguous concepts. [FN9] There are both commercial and non-commercial open source development projects. Some projects are co-ordinated by a legal entity, some by informal groups of developers. [FN10]

Common to all open source development is the transparency and incremental nature of all development. This means that:

- all source code—including potential software inventions—is public and commented on from the beginning; there are no periods of secrecy and neither is patent data searched before publishing;

- development is distributed in the sense that the number of contributors is in principle unlimited and their identity may be anonymous;

- development is incremental, meaning that typically contributions only cover a specific part or function of the program. A project may be abandoned by the initial developers and later continued by others.

There may be both individuals and organisations participating in the development process. The hierarchy and organisation of the development process may not be visible to the outside. A typical open source project does not require high resources to be technically efficient. Also, a successful project may gain high visibility and a large user base without significant commercial marketing efforts.

From the short description above, we can find numerous reasons why the patent system does not fit open source development process at all. [FN11] It should be stressed that open source development has so far worked fine and has produced new innovations without anyone applying for or licensing patents. It is not within the scope of this Opinion to study whether the patent system works efficiently with software development in general. It should be clear, however, that the potential setbacks to open source software development caused by an inefficient and malfunctioning patent system are far greater than they would be to other areas of innovative activity.

RISK OF PATENT INFRINGEMENT WITH OPEN SOURCE

The biggest challenge with software patents is that the infringement risk is difficult to measure and manage. It is true that statistically patent infringement cases are rare, many patents are held invalid, and a mere infringement claim does not yet trigger the termination clause for instance in GNU GPL. [FN12] In practice, however, an open source project faced with a patent infringement claim from a credible corporation may have to terminate just because it would be too costly and time-consuming to find out what the real risk is. In addition to developers, open source users as well face an infringement risk. Open source licences do not help since they typically spread the risk from any intellectual property rights infringement to the user.

Most troublesome are those software patents that are not known ex ante. Software users may be liable for infringing such patents whether the infringement has been intentional or not. In practice, only the infringement of well-known software patents can be avoided to some extent. These include for example popular audio and video for mat patents (such as MP3, DVD and DivX encoding and playback). Also it is known that Microsoft’s widely used file systems and file formats are covered by a number of ***525** patents. [FN13] Open Source Risk Management Inc, which sells patent insurances, claims that the Linux kernel could infringe almost 300 different patents. [FN14]

So what are the practical options when a patent infringement claim arrives? First, the use of the invention can be stopped. Secondly, the patent can be analysed and it can be determined whether either a licence should be negotiated or a new implementation around the patent written. While legally perhaps the safest option, writing a new implementation takes resources and some extra motivation might be needed to “invent the wheel” again. Licensing has its problems too: the patent licence should be practically free of charge because of the terms of open source licences (such as GPL cl.7 noted above) and because most individual developers and noncommercial projects could not afford any fees in the first place. Now, how many patent-owners would be ready for that? Finally, it is difficult to argue why anyone should buy a licence to an invention which he cannot in many cases even utilise (there is no source code in patents).

The most recent option to minimise patent infringement risk is insurance. Companies who actually own the copyright and patents in their (open source) software may naturally sell warranties and indemnification to their users. [FN15] A "pure" open source software product, which no one owns and controls, is a more complicated animal to insure. However, some big IT and insurance companies have started to offer separate warranties and insurances for both the developers and users of open source software, including Linux. [FN16] A liability insurance may be therefore a viable risk management option for instance to small companies who use open source extensively in their business.

POLICY DEBATE ON OPEN SOURCE AND SOFTWARE INNOVATION

A critical policy debate on software patents has been active for years. [FN17] The opponents of software patents—mainly individual developers, activists with various backgrounds, and small companies—have gained high visibility with comparably lower resources than pro-patenting advocates. The debate is currently most relevant in the EU, where several consultation and research reports have been published on the issue. [FN18]

From the open source perspective the most important problems have been said to be:

• because of open source code, patent infringements are relatively easy to detect and prove;

• low resources do not allow patent search and legal defence in the event of infringement claims based on trivial patents;

• in particular the ethics and philosophy of free software are strongly against the use of patents of any kind in software development;

• source publication on the internet may be interpreted to happen in all jurisdictions and hence infringe potential patents anywhere [FN19];

• non-open source software developers may compete against open source developers with patent infringement claims; if their patents are held valid and open source developers are required to obtain licences, there is no guarantee of the terms of these private licence agreements between the open source development community and a commercial software company.

Suggested solutions in the recent studies and reports have varied:

• solving the problem of trivial patents (Bekkels);

• founding a patent pool for the open source community (Pbt Consultants);

• adjusting the development model to include patentable research (Nichols);

• special liability exceptions to open source developers (Blind et al.).

Each of these proposals will be discussed in turn. First, solving the problem of trivial patents may not help at all. While much of open source code may be classified as generic there are major projects which produce new state of ***526** the art (operating systems, databases). Also, proponents must quite optimistically assume that the patent system works efficiently in software development and, if it does not, it can be easily fixed. However, numerous studies have shown that the function of the patent system in the software industry has little or nothing to do with innovative activity. Rather, the patent system may benefit the marketing, financing, litigation and global business strategy of large companies. [FN20]

Any suggestions that open source developers should use the patent system have more fundamental problems. First, if GNU licences are used then patents may have no value: these licences require all patents relating to GNU-licensed software to be licensed to anyone free of charge. As noted above, also other open source licences have similar terms. It may prove practically impossible to change such a well-laid principle in all licences whose rationale is strongly ethical. [FN21] Secondly, for a patent pool in the open source world to be functional, it should be comparably as strong as the patent portfolios of big IT companies. It is difficult to think that hobbyists and small companies could build a strong patent portfolio consisting of thousands of patents any time soon. [FN22]

Next, while adjusting software development to the model assumed by patent law may function in large companies, it can hardly fit the informal and distributed nature of the open source development model. It should be also noted that even large companies depend on external help with patents. [FN23]

Finally, Blind et al. propose that in the future it should be considered whether non-commercial use of open source software should be exempted from patent claims—even if it takes place within a commercial environment. This approach has obvious advantages. First of all, it would be a commonly accepted social policy. Secondly, and perhaps more importantly, open source development as a methodology would not need to adapt to the abstract rules of law, which may be far from the software development reality. Instead, laws would be adapted according to the winning development method.

Liability Exceptions for Open Source?

Let us think in practical terms for a moment. Individual developers and small companies have good arguments that the open source development model would suffer from software patents. Their argument has its roots much deeper than the current public debate over the proposed directive. Their argument does not stop with the directive.

Since open source forms an essential and growing part of the software industry today, it is in the interest of all participants, big global companies as well, to find a solution to the worries of patent opponents. Arguing that the patent system will work in the future and increase innovation in the software industry is not an answer to their problem. The question is about open source development and a licensing model which is in conflict with the software development and licensing model assumed by patents.

This Opinion has put forward a practical approach to the problem of open source and software patents. What realistic proposals do we have for those affected by patents? From the individual developer or small company perspective, the insurance option is worth considering. The annual price of the insurance reflects the actual price of software patents. From a social policy perspective, writing new exceptions into a new law seems the best possible answer. Unfortunately, the political debate in the EU has been going backwards and forwards without a clear answer to those worried about open source. Currently, the exception approach is at risk. [FN24]

Finally, let us make a quick speculation. What would happen if the exception approach were to win in the end? Quite interestingly, Blind et al. go on to note that if a liability exception to open source is sought then the TRIPs Agreement would also need similar revisions. Here, one may compare the position of open source advocates to those of developing countries. Both have general intellectual property (software code and indigenous cultural knowledge) which multinational corporations try to claim as their private property. The difference is that open source advocates work mainly ***527** in the developed world and their relative economic and political power may be far greater than those of the third-world developing countries. Open source advocates, if united to oppose TRIPs, may actually become a serious player in the fight for the ownership of the knowledge economy. [FN25] Now, wouldn't that be interesting?

FOOT NOTES :

MIKKO VALIMAKI

University Lecturer

Helsinki University of Technology

FN1. Warnings have a long history in developer communities: there has been campaigning against software patentability since the early 1990s. See e.g. The League for Programming Freedom, “Against Software Patents”, February 28, 1991, http://lpf.ai.mit.edu/Patents/against-softwarepatents. html.

FN2. See Proposal for a Directive of the European Parliament and of the Council on the patentability of computer-implemented inventions, Brussels, February 20, 2002, COM (2002) 92 final. The most active critique has come from the Foundation for a Free Information Infrastructure, a group run by Hartmut Pilch. See http://www.ffii.org/.

FN3. For example, Linux developers Linus Torvalds and Alan Cox sent an open letter to the European Parliament in the autumn of 2003 expressing their deep concerns. See www.effi.org/patentit/patents_torvalds_cox.txt.

FN4. Political debate at an EU level on software innovation is not new either. Lobbying on the Council Directive of May 14, 1991 on the Legal Protection of Computer Programs, 91/250, centred on the questions of whether reverse engineering and copyright over interfaces would threaten software development and innovation. See Jonathan Band and Masanobu Katoh, Interfaces on Trial: Intellectual Property and Interoperability in the Global Software Industry (Westview Press, 1995). What is new in the patenting debate, however, is the strong role of individual developers and activists.

FN5. For a complete list of open source licences, see www.opensource.org/licenses/.

FN6. Axel Metzger and Till Jaeger, Open Source Software (Verlag C. H. Beck, 2002). See also www.ifross.de/ifross_html/lizenzcenter.html.

FN7. The patent language in GNU licences dates back to 1991, when the licence author Richard M. Stallman and the Free Software Foundation were already campaigning against software patents in the United States.

FN8. Some of them may have even more farreaching termination clauses that try to affect the enforceability of other software patents as well. See e.g. the latest versions of the Apache licence and Open Software Licences.

FN9. In this Opinion, the term “open source” also covers free software. The difference between the meaning of these two terms is mainly philosophical and political. See Richard M. Stallman, “Why ‘Free Software’ is better than ‘Open Source’”, www.gnu.org/philosophy/free-software-forfreedom. html.

FN10. A good overview of open source development process is e.g. Joseph Feller and Brian Fitzgerald, Understanding Open Source Software Development (Addison-Wesley, 2002).

FN11. These are discussed in more detail below.

FN12. For example Open Source Initiative’s legal counsel Lawrence E. Rosen has stressed that for these reasons open source developers should not be too worried about patents. See his article “Patents in an open source world”, NewsForge, July 27, 2004. Interestingly, a leaked memo from Hewlett-Packard shows how real many companies see potential patent risks with open source. See “HP memo forecasts MS patent attacks on free software”, NewsForge, July 19, 2004.

FN13. For MP3 patent licensing, see www.mp3licensing.com/; for DVD licensing, see www.licensing.philips.com/licensees/conditions/dvd/; for DivX licensing, seewww.divx.com/divx/licensing/. At the moment Microsoft licenses the FAT filesystem and it is possible that in the future also the widely used NTFS will come under a similar patent licensing programme. Also, their new XML-based file formats are under patent licences. For Microsoft’s patent licensing, see www.microsoft.com/mscorp/ip/ .

FN14. See Open Source Risk Management’s press release, “Results of First-Ever Linux Patent Review Announced”, August 2, 2004. Available at www.osriskmanagement.com/.

FN15. This business model is called dual licensing. For more details see e.g. Mikko Välimäki, “Dual Licensing in Open Source Software Industry” (2003) 8/1 Systèmes d’Information et Management 63-75. Available at www.valimaki.org/.

FN16. See e.g. different Linux indemnification policies introduced by HP, Novell and Red Hat. Also, some insurance companies have introduced “IPR Insurance” policies to comprehend traditional corporate liability insurances. See n.14 above.

FN17. See n.1 above and e.g. Kenneth Nichols, Inventing Software (Quorum Books, 1998), p.103 and www.bustpatents.com/software.htm.

FN18. See e.g Reinier Bakels, “The Patentability of Computer Programs”, European Parliament Director-General for Research Working Paper, 2002; Knut Blind, Jakob Edler, Ralph Nack and Joseph Strauss, Mikro und makroökonomische Implikationer der Patentierbarkeit von Softwareinnovationen (2001); PbT Consultants, The Results of the European Commission Consultaion Exercise on the Patentability of Computer Implemented Inventions (2001); and Robert Hart, Peter Holmes and John Reid, The Economic Impact of Patentability of Computer Programs (2000).

FN19. See http://swpat.ffii.org/papers/ewhcmh020315/index.en.html.

FN20. See e.g. James Bessen and Robert M. Hunt, “An Empirical Look at Software Patents”, National Bureau of Economic Research Working Paper £2003-17 and Paul A. David, Dominique Foray, Bronwyn H. Hall, Brian Kahin and W. Edward Steinmueller, “Is there really a good economic rationale for an EU Directive on Software Patents?”, Working Paper, July 14, 2003.

FN21. See also Richard Stallman, “Saving Europe from Software Patents” http:// features.linuxtoday.com/news_story.php3?ltsn=1999-05-16-003-05-NW-LF.

FN22. For example IBM and Microsoft apply currently for over 3,000 patents annually. See “Gates wants patent power”, News.com, July 29, 2004.

FN23. Blind, Edler, Nack and Strauss, n.18 above.

FN24. Initially, the Commission’s proposal did not include too many exceptions for open source. The EU Parliament changed the tone by voting for numerous exceptions to the directive proposal in the autumn of 2003. In the spring of 2004, Ireland’s new “compromise proposal” once again revised most of these changes out. The debate goes on.

FN25. For a recent overview of the issues, see Peter Drahos and John Braithwaite, Information Feudalism: Who Owns the Knowledge Economy? (Earthscan Publications, 2002).

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THE PATENTABILITY OF COMPUTER PROGRAMS, ACCORDING TO THE COMMISSION'S NEW PROPOSAL FOR A DIRECTIVE AND TO THE EPO BOARDS OF APPEAL DECISIONS

Effimia Panagiotidou.

Abstract: Discusses the proposal for a European Parliament and Council Directive on the patentability of computer implemented inventions, including: (1) the legal basis and structure; (2) the scope; (3) the coexistence of rights under copyright and patent law; (4) the requirements of patentability; and (5) form of claims. Considers the European Patent Office Board of Appeals ruling in IBM/ Computer programs (T935/97) and (T1173/97).

*126 The Statutory Framework Currently in Force

Until very recently, the patenting of computer programs at European level, was regulated only by Art.52 of the European Patents Convention ("EPC"), which excludes the patentability of computer programs when the application relates to the computer program "as such" (s.2(c) and s.3).

On February 22, 2002, the European Council and the European Parliament adopted a Proposal for a Directive on the patentability of computer-implemented inventions. [FN1] Through this legislative measure, the EU seems to tend to bring an end to the very complicated matter of patentability of computer programs, which has puzzled the EU Council and the Commission, as well as the EPO Boards of Appeal, for many years.

The Proposal does not deal directly with the patenting of "computer programs" and does not directly contravene the provisions of Art.52 of the EPC. The Community legislator avoids legalising the patentability of computer programs "as such" and confronts the whole problem by introducing a new, more general term, describing a whole new category of inventions, the so-called "computer-implemented inventions". The meaning of this new term, as well as the possibility of patenting computer programs through the provisions of the Proposal, are studied in this article.

The Proposal was not adopted unexpectedly. It is placed among the First Action Plan for Innovation in Europe, [FN2] and is based on the Green Paper on the Community Patent. [FN3] The previous Consultation Paper of the Commission [FN4] and a final round of consultations, which received almost 1,450 responses from the public and from small and medium-sized enterprises ("SMEs"), led to the adoption of the Proposal. [FN5]

According to the explanatory memorandum and the preamble to the Proposal, the reasons for the adoption of the Directive are, the high value of the packaged software market in Europe (approximately ##39 billion), the low competitiveness of the European Economy on this specific sector, the falling tendency of European applications for patents, the necessity to promote productivity of EU software SMEs, the encouragement of investment in this field and the harmonisation of the national patent laws regarding computer-implemented inventions.

But apart from those reasons, the Proposal also tries to fall into line with the TRIPs Agreement, signed in 1994 by the Member States of the WTO, which contains, among others, Intellectual Property provisions. Art.27 of the TRIPs Agreement states that patent diplomas shall be granted for any invention, product or process belonging to any field of technology, which is new, involves an inventive step and presents industrial applicability. From this it follows that, according to the TRIPs Agreement, computer programs are not excluded from patentability, not even "as such". [FN6]

So, it could be assumed that the Proposal constitutes an effort on behalf of the EU to fulfill the obligations undertaken under the TRIPs Agreement, specifically of Art.27 of the Agreement. [FN7] It could also be assumed that, by introducing the intermediate term "computer-implemented inventions" and by avoiding direct legalisation of patenting "computer programs as such", the EU is attempting to balance the contrary obligations burdening the Member States: under the Munich Convention on the one hand, which excludes computer programs from patentability, and under the TRIPs Agreement on the other, which does not.

As a result, the statutory framework for patenting computer programs, today, is defined by a combination of Art.52 of the EPC and of the new Proposal if it is adopted as a directive, which derives from the provisions of the TRIPs *127 Agreement. [FN8] However, European patents are not granted by the EU, nor by the WTO. Neither the TRIPs Agreement nor the Proposal bind the EPO Boards of Appeal, [FN9] which remains the sole and ultimate competent authority able to grant or to refuse to grant European patents, under Art.52 of the EPC. [FN10]

In interpreting the prohibition "as such" of Art.52, the EPO Board of Appeal has consolidated in its case law, some specific wording formulas of the claims regarding computer programs, given below in this article (under Form of claims). Those wording formulas of the claims are considered by the Boards of Appeal to be acceptable, as not claiming the patenting of the program "as such" and so, are permissible under Art.52. And all these formulas—with one exception—are also adopted by the Proposal.

Therefore, even if the Directive is approved as proposed, the conclusions given below do not concern solely the provisions of the Proposal, but also the case law of the Boards of Appeal. The parallel study of these two legal sources seems to be the most appropriate way for reaching unified conclusions about the patentability of computer programs today.

LEGAL BASIS AND STRUCTURE OF THE PROPOSAL

The Directive relies on Art.95 of the EC Treaty as the legal basis for the harmonisation of the national laws of the Member States and the integration of the common market. [FN11]

The Proposal is comprised of 11 articles, where Art.6 preserves the application of the provisions on the decompilation and interoperability of Directive 91/250. According to the Preamble to the Proposal, the Directive does not abolish the protection of computer programs under the provisions of Directive 91/250 but establishes simultaneously their parallel protection under the provisions applied for patents. Moreover, the Directive does not aim at the replacement of the current national patent law of the Member States, nor at the enactment of a new special legislation. The national patent law currently in force, will remain the same in general, and shall be applied to computer implemented inventions, as well. However, certain amendments shall take place in order for the provisions of the new Directive to be applied. [FN12]

Articles 7-8 concern the monitoring of the impact of the Directive within Europe on behalf of the Commission and the addressing of a report to the Parliament and the Council on the operation of the Directive within three years from the date when the Member States will transpose it into national law. Articles 9-11 are standard articles governing the coming into force of the Directive and its transposition by the Member States. [FN13] Only Arts 1-5 form substantial law provisions, upon patentability of computer implemented inventions and are considered in this article.

Scope of the Proposal (Arts 1 and 2 of the Proposal)

According to the Proposal, the Directive is applied to "computer-implemented inventions", a term defined as "any invention the performance of which involves the use of a computer, computer network or other programmable apparatus and having one or more prima facie novel features which are realised wholly or partly by means of a computer program or computer programs." So, according to this definition, a computer-implemented invention is an invention with a direct connection between the prima facie novel features and the computer program: the program brings about, actually produces, the realisation of the invention.

Protection to The Ideas and Principles Underlying Any Element of a Computer Program—Co-existence of Double Judicial Protection in the Same Program

Contrary to copyright law, a patent for a computerimplemented invention protects the ideas and principles which underlie any element of the computer program as stated in the claims. [FN14] Consequently, according to the provisions of the Proposal, the same program is protected under copyright law in some parts of it (the form of expression) and under patent law in some other parts (the ideas and principles which underlie it). in this case, rights under copyright law and rights under patent law co-exist regarding the same program and are complementarily applied in parallel, without violating nor canceling each other.

*128 As a consequence of the monopoly attributed by the patent, the patent-owner may prohibit any third party from using a computer program based on the ideas and principles claimed in his patent. The same applies even if the second program has a different object code or source code.

However, the codes of the patent-owner as well as of the third party, if they have a different form of expression, are both protected under copyright law, notwithstanding the fact that the ideas and principles underlying the second program are not protected under patent law. The question arising here, however, is how the owner of the second program could use it, when that program, even protected under copyright law, violates the patent of the first program by using the same ideas and principles.

Standards for Patentability of Computer Programs- the Four Requirements of Patentability

The substantial requirements of patentability for all technical achievements are three: to be susceptible of industrial application, to be new, and to involve an inventive step (Art.52 of the EPC). However, especially for a computer-implemented invention to be patented, there is one more requirement to be fulfilled first.

The production of a further technical effect (Art.3 of the Proposal)

The applicant first must prove that the basic requirement of an "invention" occurs, meaning that the achievement has a technical character, that it belongs to a technical field. This requirement is considered to be fulfilled if the program realising the novel features of the invention, when it is run on a computer, solves a technical problem or produces a further technical effect. The word "further" here, means beyond the obvious fact that the program operates the computer. Programs without that further technical effect do not belong to any field of technology, so are not considered to be inventions at all and are not patentable. They are just abstract intellectual creations protected only under Copyright Law provisions.

The requirement of the technical character was at initially clarified in the two cases known as Computer Program Product I & II. [FN15] The Examining Division of the EPO refused to grant patents to the applicant IBM, for the reason that some of the main claims of the applicant claimed the patenting of the computer program "as such", thus contravening Art.52(2)(c) and (3) of the EPC. In both of the appeals, the Board of Appeal, declared that the technical character of a program cannot derive only from the fact that the program operates the computer, as this is a feature common to all computer programs. [FN16] Similarly, the technical character cannot derive only from the means by which the program is saved (i.e. the computer), nor from the fact that the program is destined to be used on a machine (i.e. on a computer). [FN17] Finally, the technical character cannot derive from the method or the system on which the program is used. On the contrary, the technical character must be searched in those further effects following the execution of the instructions given by the program, when those further effects have a technical character or solve a technical problem. The requirement of a "further" effect has the meaning of a technical effect, beyond the fact that the program operates the computer. As a result, a patent can be granted to an invention, where a program through a computer achieves the application of an industrial procedure or the operation of a machine. Also, a patent can be granted, to any invention where the program is the only means or one of the necessary means to achieve a predetermined technical effect, even if that technical effect is achieved under the instructions of the program, through the internal operation of the computer only. [FN18]

The decision emphasises once again, that the technical effect is not the fact that the program operates the computer, but what is achieved beyond that, because the program operates the computer and through that operation. [FN19] When a program is not applied to a specific technical invention, it does not have a further technical effect and so it does not belong to any field of technology. Therefore, it is considered to be non-patentable, as claiming the patenting of the program "as such". [FN20]

*129 For the same reason, an abstract algorithm, an algorithm defined without any reference to a physical environment, is considered as a theoretical entity. Therefore, it cannot be considered as a "computer-implemented invention" and does not belong to any field of technology. [FN21]

The inventive step (Arts 2 and 4 of the Proposal)— the "problem and solution approach"

With regard to the inventive step of a computer implemented invention, the applicant will have to include in the description and in the claims, all the necessary features in order to prove that the invention involves a technical contribution to the state of the art meaning that the invention involves technical features different from those belonging to the state of the art, non obvious to the skilled person.

According to the Explanation of the Directive article by article, "the technical contribution must be regarded as a qualification of, and not a substitute for, the definition of an inventive step as it appears in Article 56 of the EPC". So, initially, the applicant must establish the technical contribution of the invention, by fulfilling two prerequisites: the contribution to the state of the art and the non-obviousness to the person skilled in the art. After the technical contribution is established, then it is assessed in order to ascertain the existence of an inventive step. So, inventiveness comprises three stages:

(a) Contribution to the state of the art

In computer-implemented inventions, it must first be ascertained that their contribution to the state of the art has a technical character, that is that the solution suggested by the invention is a technical solution. [FN22] The reason for this provision is the fact that in computer-implemented inventions, some of their inventive features might be technical and some might not be. Consequently, when the solution proposed by the invention does not have a technical character, the invention presents no technical contribution to the state of the art and, therefore, does not involve an inventive step. [FN23]

(b) Non-obviousness to the skilled person

The second prerequisite for the requirement of the technical contribution is the technical contribution of the invention to be non-obvious to the person skilled in the art. On this matter, the Proposal applies Art.56 of the EPC, which is identical for all kinds of inventions.

In order to assess the non-obviousness, the Guidelines instruct the examiners to apply the "Problem and solution approach", that is to estimate the technical solution proposed by the invention to a technical problem. [FN24] This rule, has three main stages:

- in the first stage, the examiner determines the closest prior art to the claimed invention;
- in the second stage, the examiner establishes the technical problem to be solved by the claimed invention;
- in the third stage, starting from the closest prior art and the technical problem, the examiner considers whether *130 or not the claimed invention would have been obvious to the person skilled in the art. [FN25]

(c) Assessment of technical contribution

The assessment of the technical contribution (contribution to the state of the art and non-obviousness to the skilled person) will demonstrate whether the invention involves an inventive step. According to the Consultation Paper, an inventive step is considered to be involved in the claimed invention when there is a difference between the scope of the patent claimed considered as a whole (elements of which may comprise both technical and non-technical features) and the state of the art.

To assess this difference, the "Problem and solution approach" is applied again to investigate whether the claimed invention offers a technical solution to a technical problem.

According to the Consultation Paper, the solution, i.e. the technical contribution, may lie:

- in the problem solved by the claimed invention; and/or
- in the means, that is the technical features constituting the solution of the underlying problem; and/or
- in the effects achieved in the solution of the underlying problem. [FN26]

Consequently, when a computer-implemented invention claims:

- the solution to a problem, in a way not known to the state of the art; and/or
- the solution to a problem by using means different from the means used according to the state of the art; and/or
- the solution to a problem in a way which achieves results different than the results achieved according to the state of the art; then, that invention is assessed as an invention involving an inventive step.

Novelty and industrial applicability

Since the Proposal has no special provisions regarding novelty and industrial applicability of computer-implemented inventions, it must be assumed that for the fulfillment of these last two requirements, the same general provisions as for all other kinds of inventions are applied (Art.54(1) and Art.57 of the EPC).

Form of Claims (Art.5 of the Proposal)

In order for a patent application not to be considered as claiming the patenting of the program "as such", the applicant must adopt in his claims specific wording forms for a computer implemented invention: as a product claim and as a process claim. Those wordings are given in Art.5 of the Proposal, but they are also accepted by the case law of the EPO Boards of Appeal. However, as shown below, the Board also accepts the claiming of the computer program product in itself.

AS A PRODUCT CLAIM

That is, as a programmed computer, a programmed computer network or other programmed apparatus. This means that the claim will concern a unit consisting of a specific combination of hardware and software. It must be kept in mind that this specific combination must always produce a further technical effect. The Boards of Appeal, first in Vicom and later in Koch & Sterze, [FN27] ruled that "an invention which would be patentable in accordance with conventional patentability criteria should not be excluded from protection by the mere fact that for its implementation modern technical means in the form of a computer program are used. Decisive is what technical contribution the invention as defined in the claim when considered as a whole, makes to the known art. Finally, it would seem illogical to grant protection for a technical process controlled by a suitably programmed computer but not for the computer itself when set up to execute the control".

AS A PROCESS CLAIM

This means a process carried out by such a computer, computer network or apparatus through the execution of software, where "such" means a programmed computer or computer network or apparatus.

Those specific two forms of the claims laid down by the Directive and also accepted by the EPO Boards of Appeal case law resemble those required by the Guidelines of the United States Patent and Trademark Office ("USPTO") and of the Japanese Patent Office ("JPO"), concerning applications on computer-implemented inventions. [FN28] As a consequence of this similarity in the form of the claims in the EU, the USA and Japan, the applicant for a patent to the USPTO or to the JPO will have the right to file the same application to the EPO, and the PCT Rule 67.1(vi) which excludes the International Preliminary Examination on an international application *131 when the subject matter is computer programs, shall not be applied. At the same time, the applicant for a computer implemented invention to the EPO will have the right to apply for a patent from the USPTO or the JPO as well, without amending his claims and thus endangering the remark that the scope of the invention is broader than originally filed.

As a computer program product claim

Apart from the product claim and the process claim, the case law of the EPO Boards of Appeal accepts one more alternative: to claim the patenting of the computer program product alone.

In the cases Computer Program Product I and II, the Board developed the reasoning of Vicom and ruled that:

"... the present Board finds it illogical to grant a patent for both a method and the apparatus adapted for carrying out the same method, but not for the computer program product, which comprises all the features enabling the implementation of the method and which, when loaded in a computer, is indeed able to carry out that method". [FN29]

In the same cases, the Board also ruled that there are many ways to form a claim for a computer program product and that it is not important whether the program is claimed alone, or stored in a means or in the form of a signal, i.e. a program stored on disk as a file, or a program transmitted through the internet. And that "the computer program product comprises a computer-readable medium on which the program is stored, this medium only constitutes the physical support on which the program is saved, and thus constitutes hardware". [FN30] Moreover, in a computer implemented invention, the claim may relate to the computer program product if it presents all the features of the application of a method and if loaded to a computer, it applies the method. According to the Boards of Appeal, in those cases the claim for a computer program product is not considered as claiming the patenting of the program "as such". [FN31] In a claim of such nature, the applicant will have to describe all the functions of the software, assuring the patentability of the method applied by the program.

The national courts and the national patent offices of EPC contracting states immediately adopted that case law. These states try to implement their national patent law —enacted in conforming to the EPC—in a way similar to the way the EPO Boards of Appeal interprets the EPC. So, in case X ZB 16/00, the BGH seems to approve the EPO practice and to accept a claim related to computer programs alone, provided they achieve a technical contribution through the computer. Similarly, the UK Patent Office issued a notice allowing program product claims in the form approved in Computer Program Product I and II cases. [FN32]

The Guidelines for Examination in the EPO also adopted that case law with an amendment issued in August 2001 in order to conform to the recent case law of the Boards of Appeal. According to the amended Guidelines, the applicant for a computer implemented invention may claim the patenting of the computer program product if the program, when run on a computer, produces a technical effect, perhaps already known to the state of the art, but going "beyond the 'normal' physical interactions between program and computer". [FN33]

CONCLUSIONS

The recent EU Proposal for a Directive on the patentability of computer-implemented inventions and the case law of the EPO Boards of Appeal form new conditions regarding the patentability of computer programs.

The analysis of those two legal sources demonstrates that today the inventor of a computer program, in order to be granted a patent, must establish in his description and claims the fulfillment all of the four following prerequisites:

- that the application of the program when it runs the computer, a computer network or a programmable apparatus, produces a further technical effect, solves a technical problem and so belongs to a technical field;

- that the claimed invention presents a technical contribution to the state of the art, that is, it involves technical features and so solves a technical problem by a technical solution, non obvious to the person skilled in the art. And that from this technical contribution occurs a difference between the scope of the patent claimed and the state of the art, so the invention involves an inventive step;

- that the claimed invention is new; and

- that the claimed invention is susceptible of industrial application

The claims of that invention must be formed as:

1. a programmed computer, a programmed computer network or other programmed apparatus; or/ and

2. a process carried out by a programmed computer, computer network or apparatus through the execution of software; or/and

3. a computer program product alone, or a program as a recording to a medium, or a program in the form of a signal, with the ability when run to a computer to produce a further technical effect.

*132 This last form of claim is not provided for the Proposal, however it is accepted by the EPO Boards of Appeal as not claiming the patenting of the program "as such". Thus, the prohibition of Art.52 of the EPC concerning the patentability of computer programs is avoided, and it could be assumed that, in this way, the EPO does indeed take into consideration the obligations deriving from the TRIPs Agreement, burdening the EU and the member states. On the contrary, the EU, although bound by the TRIPs, in the Proposal excludes from patentability computer program products alone and demands the amendment of Art.52 of the EPC just to permit the patentability of a programmed apparatus or of a procedure accomplished by a programmed apparatus through the execution of software, and not of the computer program alone. Article 52 was not among the EPC articles that were amended last summer. Apparently, the European Patent Organisation is waiting for the final text of the Directive in order to amend Art.52, falling in line with it. Until then, and given the fact that the EPO remains the sole competent authority to grant European patents, it must be accepted that the applicants may form their claims in any of the above three types.

Within three years from the moment the Directive comes into force, the Commission must submit to the European Parliament and the Council a report on the effectiveness of its provisions. In the meanwhile, according to the Proposal, the EU Member States will have to amend their national law and to concern about the immediate amendment of the provisions of the EPC.

What is left to be seen by then, is whether the EU decision to sign the TRIPs Agreement and to fulfill the consequent obligation of legalising patenting of computerimplemented inventions, will verify its expectations to promote productivity of the software SMEs, to reduce unemployment and to increase the competitiveness of EU software products against those of the USA and Japan; and whether, for the realisation of all these, the EU is determined, apart from the new legislative measures, to help European software SMEs, through education and grants, in order to meet the high cost of innovative research and of legal representation. Otherwise, the danger of the creation of new monopolies and— even more—of the absolute domination of those already existing, can easily be predicted. [FN34]

FOOT NOTES :

FN LL.M. (Bristol, UK), Ph.D, post doc. (Aristotle University of Thessaloniki); author of Patent Diploma to Computer Programs, post doc. published by Sakkoulas Editions, Athens-Thessaloniki, Greece, December 2002.

FN1. Proposal for a Directive of the European Parliament and of the Council on the patentability of computer-implemented inventions, COM/ 2002/0092-COD 2002/0047, O.J. C151/129.

FN2. The First Action Plan for Innovation in Europe-Innovation for growth and employment, COM/96/0589 final.

FN3. Promoting innovation through patents-Green Paper on the Community patent and the patent system in Europe, COM/97/0314 final. The Green Paper was also the basis for the recently adopted Proposal for a Council Regulation on the Community patent, COM/2000/0412 final-CNS 2000/0177, [2000] O.J. C337/278.

FN4. The Patentability of Computer-Implemented Inventions, Consultation Paper by the Services of the Directorate General for the Internal Market, October 19, 2000, http://europa.eu.int/comm/internal_market/en/indprop/softpaten.htm.

FN5. Explanatory Memorandum of the Proposal, The background to the initiative: Commission's consultations.

FN6. See Daniele Schiuma, TRIPs and Exclusion of Software "as Such" from Patentability, IIC 2000.36.

FN7. The EU ratified the TRIPs Agreement autonomously, independently from the Member States, with the Council Decision 94/800 concerning the conclusion on behalf of the European Community, as regards matters within its competence, of the agreements reached in the Uruguay Round multilateral negotiations (1986- 1994), O.J. L336/1.

FN8. The Preamble of the Proposal (no.6) also makes a direct reference to the commitment deriving from the TRIPs Agreement, regarding the EU and the Member States.

FN9. Moreover, regarding the TRIPs Agreement, the Board of Appeal, in Case T 1173/97-3.5.1, Computer program product I/IBM [1999] O.J. EPO [609] Boards of Appeal of the EPO, and T 0935/97-3.5.1, Computer program product II/IBM [1999] R.P.C. 861, which is studied below, www.european-patent-office.org/dg3/biblio/t971173fp1.htm, has stated that, it is doubtful whether the provisions of the TRIPs Agreement generally, and Art.27 specifically, have any direct effect on the patents granted under the EPC. The European Patent Organisation, is neither a member of the WTO, nor has ratified the TRIPs Agreement. Moreover, always in accordance with the Board's decision, the TRIPs Agreement binds only the states contracted to it, and all the states that participate to the EPC are not contracting states to the TRIPs Agreement. Finally, Art.30 of the Vienna Convention, which deals with the application of successive treaties relating to the same subject matter, does not provide any justification for applying TRIPs to the EPC. However, according to the Board of Appeal, TRIPs must be taken into consideration, since it sets common standards and principles on the patentability of computer implemented inventions and "gives a clear indication of current trends". The Boards of Appeal case law, as summarised below, demonstrates that the EPO does indeed take into consideration the TRIPs' common standards and principles in deciding the patentability of computer implemented inventions.

FN10. Already, in the Preamble of the Proposal, the Commission requests by the Member States to concern about the immediate amendment of the provisions of the EPC.

FN11. Art.95 constitutes the legal basis for other EU legislative measures concerning intellectual property matters, such as First Council Directive 89/104 to approximate the laws of the Member States relating to trade marks, [1989] O.J. L207/44, Council Directive 91/250 on the legal protection of computer programs, [1991] O.J. L122/42, Council Directive 93/98 harmonising the term of protection of copyright and certain related rights, [1993] O.J. L290/9, Directive 98/44 of the European Parliament and of the Council on the legal protection of biotechnological inventions, O.J. L213/21. Art.95 has also been recognised by the ECJ as the most appropriate legal basis, see Explanatory Memorandum of the Proposal for Cases C-350/92 Kingdom of Spain v Council of the European Union [1995] E.C.R. I-1985 and C-377/98 Kingdom of the Netherlands v European Parliament and Council of the European Union, [2001] E.C.R I-7079.

FN12. Preamble of the Proposal, 14-15.

FN13. "Explanation of the directive article by article".

FN14. The Patentability of Computer-Implemented Inventions, Consultation Paper by the Services of the Directorate General for the Internal Market, October 19, p.5, "ii. The Complementary nature of patent and copyright protection", www.europa.eu.int/comm/internalmarket/ en/indprop/comp/soften.pdf. See also Explanatory Memorandum of the Proposal, The role of algorithms and the Impact Assessment Form of the Proposal, in para.2."FWho will be affected by the proposal. Which sizes of business".

FN15. Cases T 0935/97-3.5.1., Computer program product II/IBM [1999] R.P.C. 861 and T 1173/97-3.5.1., Computer program product I/IBM [1999] O.J. EPO [609] Boards of Appeal of the EPO, in appeal by International Business Machines Corporation (IBM) against negative decisions of the Examining Division to grant patents, see also www.european-patent-office.org/dg3/biblio/t971173fp1.htm. It must be noted that the Guidelines for Examination in the EPO, Part C, Chapter IV, 2. Inventions. Programs for computers, directly refer to Case T 1173/97- 3.5.1 (see also www.european-patent-office.org/legal/gui_lines/ e/c_iv_2.htm).

FN16. This reasoning was first stated by the Boards of Appeal in Case T 0022/85-3.5.1, IBM, [1990] O.J. EPO issue12 and later in Case T 0769/92-3.5.1, Sohei, 31.5.1994, [1995] O.J. EPO issue 525

FN17. Repeating the reasoning of the Vicom Case T 0208/84-3.5.1, [1987] O.J. EPO issue 14, about an apparatus and a method for processing digital pictures. The method was using a mathematical theory, carried out by a programmed computer. The Board stated that the method was not excluded from patentability, as it was a technical process, i.e. belonging to a technical field. Moreover, the court ruled that the method was applied under the instructions of a computer program and the patent application was not related to the program "as such", but to process carried out by the program with specific steps, see David Baimbridge, Computer Law (4th ed., Pearson Education, 2000), p.109; Chris Reed and John Angel, Computer Law (4th ed., Blackstone Press, London 2000), p.340; Tim Press in Ian J. Lloyd, Information Technology Law (3rd ed., Butterworths, London, 2000), p.123.

FN18. The reasoning that an invention is patentable when the technical solution is achieved only by the program, was first stated in Case T 0115/85-3.5.1, International Business Machines Corporation (IBM) [1990] O.J. EPO issue 30, 110.

FN19. The "solution of the technical problem" reasoning, was stated by the Boards of Appeal at first in case T 0006/83-3.5.1, International Business Machines Corporation (IBM) O.J. EPO issue 5. According to the decision, "an invention relating to the coordination between programs and data files held at different processors in a data processing system having a plurality of interconnected data processors in a telecommunication network, and the features of which are not concerned with the nature of the data and the way in which a particular application program operates them, is to be regarded as solving a problem which is essentially technical. Such an invention therefore is to be regarded as an invention within the meaning of Article 52(1) EPC". See also the following cases with the same reasoning T 0208/84-3.5.1,Vicom, [1987] O.J. EPO issue 14, Case T 0163/85-3.5.1, Colour television signal/BBC [1990] O.J. EPO issue 379 and Case T 0110/90-3.5.1, International Business Machines Corporation (IBM) [1994] O.J. EPO issue 557.

FN20. The same applies for discoveries, scientific theories, mathematical methods, aesthetic creations, schemes, rules and methods for performing mental acts, playing games or doing business, and presentations of information. They are excluded from patentability when the invention is related to them "as such" (Preamble issue 7 to the Proposal). On the contrary, inventions relating to one of these items are patentable when they have a technical character, see Explanatory Memorandum of the Proposal, "The fundamental requirement of "technical character"; see also Cases T 0931/95-3.5.1, Pension Benefit Systems Partnership, O.J. 10/2001, and T 1173/97-3.5.1 1999 O.J. EPO [609] p.14, s.5.2, www.european-patent-office.org/dg3/biblio/.

FN21. See Explanatory Memorandum "The role of algorithms" and Explanation of the directive article by article, Art.3. When an algorithm can be patentable, was explained in Case T 0208/84 Vicom [1987] O.J. EPO issue 14), according to which "A basic difference between a mathematical method and a technical process can be seen, however, in the fact that a mathematical method or a mathematical algorithm is carried out on numbers (whatever these numbers may represent) and provides a result also in numerical form, the mathematical method or algorithm being only an abstract concept prescribing how to operate on the numbers. No direct technical result is produced by the method as such. In contrast thereto, if a mathematical method is used in a technical process, that process is carried out on a physical entity (which may be a material object but equally an image stored as an electric signal) by some technical means implementing the method and provides as its result a certain change in that entity. The technical means might include a computer comprising suitable hardware or an appropriately programmed general purpose computer ... A claim directed to a technical process in which the method is used does not seek protection for the mathematical method as such." For the patentability of algorithms, see also Case no.20 W (pat) 12/94, "Viterbi Algorithm", March 25, 1996, Temperatursteuerung (Temperature Control) German Federal Patent Court, 1991 GRUR 195, EPO Boards of Appeal [1987] O.J. EPO 14 [18 IIC 101 (1987)]; Tauchcomputer-Diving Computer, German Federal Supreme Court, [1993] O.J. EPO 250-IIC 645 (1993), Engel, 1993 GRUR 194, 198. Similar also is Case no.20 W (pat) Automatic Control of Sales, 8/99, IIC 2001.328 where a claim for a procedure of automatic control of sales was held to involve a technical character (but to lack an inventive step). On the other hand, Case no.17 W (pat) 49/94, CAD/CAM System, January 21, 1997 as the process did not produce any technical effect.

FN22. It must be noted, that the requirement of the technical character on the one hand (ibid., 5.1.) and the requirement of the technical solution on the other (5.2.(a)), constitute, the latter prerequisite of the former, meaning the technical solution is given when a technical problem is solved. Therefore, the EPO Guidelines instruct the examiners "to proceed directly to the questions of novelty and inventive step without considering beforehand the question of technical character". If the claimed invention solves a technical problem, then the technical contribution is assessed (Art.56). And the presence of the technical contribution establishes that the claimed subject matter has a technical character and so it is an invention within Art.52. See Guidelines, Part C, Chapter IV.2. Inventions, Programs for computers (last paragraph).

FN23. In this way the Proposal attempts to modulate a common direction for the national case law of the member states, especially of Germany and of Great Britain. The national courts of those states, on examining the problem of patentability of business methods, which are also excluded from patentability "as such", issued contrary decisions. Actually, the British courts ruled that an invention related to a computer, which is nothing more than a method of doing business or an intellectual activity, cannot be patented even if it presents a technical contribution (see Merrill Lynch [1989] R.P.C. 561 and Raytheon Co Application [1993] R.P.C. 427, following the precedent case Wang Laboratories Inc's Application [1991] R.P.C. 463, see Baimbridge, Reed and Angel op. cit.., p.345). On the contrary, the German Courts primarily accepted the patentability of methods of doing business presenting a technical perspective, even if the contribution of the invention was not only technical (see Automatic Sales Control [1999] GRUR 1078 K## X ZB 15/98 Speech Analysis Apparatus, 05.11.2000, [2000] GRUR 930, IIC 2002.343). And recently, the Bundesgerichthof, in Case X ZB 16/00, (BGH) 17.10.2001, acknowledged the approach of the EPO Boards of Appeal, according to which the technical contribution of the invention is an essential requirement of involving an inventive step (see Explanatory Memorandum "The necessity of a Community action harmonising national laws and its legal basis").

FN24. Guidelines for Examination in the EPO, Part C, Chapter IV, 9. Inventive step, www.european-patent-office.org/legal/gui_lines/e/c_iv_9.htm For the rule "Problem—solution approach", see also Cases T 0163/85-3.5.1. Colour television signal/BBC, 9.5 [1990] O.J. EPO issue 379, T 1173/97-3.5.1, Computer program product I/IBM [1999] O.J. EPO [609], T 0935/97-3.5.1, Computer program product II/IBM [1999] R.P.C. 861 and T 1194/97-3.5.2, In re Koninklijke Philips Electronics N.V. [2000] O.J. EPO 525.

FN25. The Consultation Paper mentions that the technical contribution of an invention is considered to be obvious and so renders the computer implemented invention non patentable, when the invention "merely automates a known process using well known automation techniques", see The Patentability of Computer-Implemented Inventions. Consultation Paper by the Services of the Directorate General for the Internal Market, October 19, 2000, p.6, iii, The requirement of a non-obvious technical contribution, b) Obviousness. See also Larry Cohen, The Patenting of Software [1999] E.I.P.R., 607.

FN26. The Patentability of Computer-Implemented Inventions. Consultation Paper by the Services of the Directorate General for the Internal Market, October 19, 2000, p.6, iii, The requirement of a non-obvious technical contribution, a) Technical contribution.

FN27. Case T 0208/84-3.5.1, Vicom [1987] O.J. EPO issue 14, reason no.16. For the Vicom case, see also Simon Davies, Computer Program Claims. The Final Frontier for Software Inventions, [1998] E.I.P.R. 429. In Case T 0026/86-3.5.1, Koch & Sterzel [1988] O.J. EPO issue 19, the claim was for an X-ray apparatus controlled by a data processing unit. The unit used different exposure information and regulated the voltage of the apparatus in order to achieve the most appropriate exposure to X-rays. The Boards of Appeal ruled that since the program operates the computer “so as to technically alter its functioning”, the unit of this software and hardware may be a patentable invention. The invention produced a further technical effect, which was the regulation of the X-rays and, even more, the applicant did not claim the patenting of the program “as such”, but the patenting of an apparatus, operating using technical means and so the invention was patentable. For analysis of this case see Tim Press in Lloyd, op. cit., pp.124-125.

FN28. USPTO Examination Guidelines for Computer-Related Inventions, Final Version, Patent and Trademark Office United States Department of Commerce, 2. Statutory Subject Matter (a) Statutory Product Claims, p.11, (a) Statutory Process Claims, p.15, B. Classify the Claimed Invention as to its Proper Statutory Category, p.7. and JPO Examination Guidelines for Computer Software-Related Inventions, Japan Patent Office (JPO)-Examination Standards Office, 1.1. Claims 2. p.3, 2. Requirements for Patentability, p.11.and 2.3. Inventive Step (Nonobviousness) p.15.

FN29. See reasoning 9.8., 12.2. and 13 of T 1173/97-3.5.1. with reference to the older Case T-0163/85-3.5.1. Colour television signal/BBC, 9.5.1988, [1990] O.J. EPO issue 379 www.europeanpatent-office.org/dg3/biblio/t971173fp1.htm. See also the Explanatory Memorandum of the Proposal “The fundamental requirement of ‘technical character’” and Larry Cohen, op. cit.

FN30. See reasoning 9.3. of Case T 0935/97-3.5.1, Computer program product II/IBM [1999] R.P.C. 861. See also Jean Hughes, Patentability of software, comment in IBM/Computer programs Technical Board of Appeal T-935/97 [1999] E.P.O.R. 301, [1999] E.I.P.R. N-161.

FN31. In Case T 1173/97-3.5.1., Computer program product I/IBM 1999 O.J. EPO [609], claims no.20 and no.21 were precisely for “a computer program product directly loadable into the internal memory of a digital computer ...” and “ a computer program product stored on a computer usable medium ... “, respectively.

FN32. See Case X ZB 16/00, Bundesgerichthof (BGH), and U.K. Patent Office Practice Notice of April 19, 1999 www.patent.gov.uk/patent/notices/practice/computer.htm. See also the Explanatory Memorandum of the Proposal, and Jean Hughes, New UK Patent Office approach to claims for computer software, E.I.P.R. [1999] N-159.

FN33. See European Patent Office, EPO press releases/official information: Amendment of the Guidelines for Examination in the European Patent Office regarding the patentability of business methods and computer-related inventions, August 31, 2001, http://www.european-patent-office.org/news/pressrel/ 2002_10_05_e.htm. See particularly “2. Inventions. Programs for computers”, The amendments concern also the mathematical methods, the aesthetic creations, the presentations of information and the methods of doing business.

FN34. I am really grateful and would like to thank Mr. Bruce Adams of Adams & Wilks, Attorneys and Counselors at Law, New York - USA, and Mr. Tadahiko Itoh of Itoh International Patent Office, Tokyo - Japan, for providing me with all the necessary legal sources regarding the Guidelines and the case law of USPTO and JPO

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Patenting DNA-Related Inventions in the European Union, United States and Japan: A Trilateral Approach or a Study in Contrast?
by Leslie G. Restaino, Steven E. Halpern and Dr. Eric L. Tang

I. Introduction to the Subject-Matter

A. Patents

A patent is a contract between the government and an inventor under which, in exchange for the inventor's complete disclosure of the invention to the public, the government grants the inventor the exclusive rights to exclude others from making, using, selling or offering for sale the claimed invention for a limited period of time1, normally twenty years after the date that the application for the patent was filed. When this period is over, the invention can be freely used by anyone.

The first law providing these exclusive rights to an inventor dates back to 15th century Italy. In fact, the first recorded patent was issued in Florence in 1421 to Filippo Brunelleschi.2 In the United States, the basis for the federal patent and copyright systems is found in the United States Constitution, which states: "Congress shall have power … to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." The first U.S. patent law was enacted in 1790. Since then, a variety of laws relating to patents, such as the 1930 Plant Patent Act, have been enacted by the U.S. Congress.

As clearly stated in the United States Constitution, the rationale for a patent system is to promote the progress of science and technology by encouraging and rewarding the development of new inventions. The patent system is designed to provide an effective and efficient process for the public disclosure of valuable information, which is capable of expeditiously stimulating the advancement of science and technology.

Only inventions that meet the statutory requirements of being new, useful, and non-obvious, can be patented. Inventions or discoveries, such as naturally occurring organisms, laws of nature, natural or physical phenomena and abstract ideas, cannot be patented.

Patents can be grouped into several categories, such as utility patent, design patent, and plant patent.3 In order to enjoy the benefit of a utility patent, the type of patent covering most biotechnology and DNA inventions, the claimed invention must be new, useful, and non-obvious over the prior art.4 In the United States, for example, these requirements are set forth in the Patent Act.5 Briefly, the novelty requirement is satisfied if the subject matter is new and was not disclosed or discovered by others before the inventor filed a patent application directed to the subject matter. The invention must also not be obvious from the prior work of others. In addition, the inventor must also show that the invention has a "real-world" use. It isn't enough just to find a new chemical or a new gene. The inventor must specify what the uses are, such as for example, whether the chemical or gene is useful as a drug for disease X or as a target for preventing or treating disease X or as a diagnostic marker for disease X.

In addition, the patent specification as filed must satisfy the enablement requirement of the Patent Act.6 That is, the specification must disclose the invention in sufficient detail to allow the public to make and use the claimed invention. The inventor must teach or "enable" other persons with ordinary skills in the related technological areas to use the invention described by the inventor. The specification must put forth the "best mode contemplated by the inventor of carrying out his invention" at the time the application was filed.

B. Understanding DNA, Genetics, and Biotechnology

Biotechnology is "the application to industry of advances made in the techniques and instruments of research in the biological sciences."7 It covers many disciplines and, broadly speaking, may be defined as the synergistic union of the biological sciences and the technologically based industrial arts. In other words, biotechnology is the utilization of biological processes, as through the exploitation and manipulation of living organisms or biological systems, in the development or manufacture of a product or in the technological solution to a "real-world" problem. As such, the advancements made in the biotechnology area have broad and significant impact in pharmacology, medicine, agriculture, and many other fields.

People have been practicing biotechnology for thousands of years, including for example, the breeding and development of new crops and livestock, and the production of wine and beer through fermentation. However, it was the discovery of DNA structure in 1953 by James D. Watson and Francis H. C. Crick and the subsequent development of recombinant DNA technology in the 1970s, which facilitated the success of the biotechnology industry. Recombinant DNA technology, also called genetic engineering, has been widely used to manipulate the DNA of bacteria and other organisms to manufacture biological products such as industry materials and drugs. A common technique involved in this process is to insert a gene that produces a desired product into bacteria. Bacteria can then be grown in large quantities and processed to extract the desired substance. The same procedure can be performed using cultured plant and animal cells. Genetic engineering also has become a revolutionizing force to the "old" biotechnology industries. For example, corn, wheat, vegetables, and fruits with such desired qualities as pest, disease, and herbicide resistance have been created through genetic engineering. Today, most inventions in the biotechnology field, including the development of new plant varieties and animals, are DNA-related because of their basis in genetic engineering.

Two types of vehicles are used by living organisms to carry hereditary information; deoxyribonucleic acid (DNA) and ribonucleic acid (RNA). With the exception of some RNA viruses, most organisms use DNA to carry hereditary information. DNA is nucleic acid which consists of two linear, non-branching polynucleotide strands that form a double helix held together by hydrogen bonds between purine and pyrimidine bases which project inward from the two backbone chains. There are four distinct types of nucleotides in a DNA molecule: deoxyadenosine (A); deoxyguanosine (G); deoxythymidine (T); and deoxycytidine (C). It is the non-random and theoretically indefinite number of combination of these individual "bases" that result in DNA being chosen as an informational molecule by nature during hundreds of millions of years of evolution. A naturally-occurring DNA molecule generally comprises more than one gene, which is a specific sequence of nucleotides and the fundamental physical and functional unit of heredity. A genome is the complete set of an organism's genetic material. For example, the human genome has about 3 billion nucleotides, which encodes more than 30,000 genes.8

II. DNA and Biotechnology Inventions as Patentable Subject-Matter

Despite the fact that Louis Pasteur, the famous French scientist, received U.S. Patent No. 141,072 in 1873, claiming "yeast, free from organic germs of disease, as an article of manufacture," and patent offices throughout the world issue patents covering DNA and biotechnology inventions on a regular basis, the issue of whether living materials, such as plants or animals, or naturally-occurring substances, such as DNA and protein, may constitute the subject of an invention is still very controversial. Such controversy is still currently debated in almost every corner of the world today.

A. UNITED STATES

The U.S. patent laws require that, to be patentable, an invention must pass the standard subject matter test.9 The claimed DNA and biotechnology inventions, such as living organisms or natural compounds, cannot be those that occur or exist in nature.10 One cannot obtain a patent on, for example, just any oyster, because an oyster exists in nature. If, however, an inventor creates a new type of oyster through genetic engineering that never existed before, then that type of oyster might be patented.

1. MICROORGANISMS

Since the 1873 patenting of Louis Pasteur's yeast, microbes have been historically considered patentable subject matter. In fact, with the phenomenal growth of genetic engineering in the late 1970s, the patentability of living microorganisms survived scrutiny, and was confirmed by the Supreme Court. A landmark case, *Diamond v. Chakrabarty*11, involved Ananda Chakrabarty's invention of a new bacterium genetically engineered to degrade crude oil. In this case, the Supreme Court stated that new microorganisms not found in nature, such as Chakrabarty's bacterium, were "manufacture" or "composition of matter" within the meaning of § 101 of the Patent Act and were thus, patentable. The court explained as follows:

[Chakrabarty's] microorganism plainly qualifies as patentable subject matter. His claim is not to a hitherto unknown natural phenomenon, but to a nonnaturally occurring manufacture or composition of matter — a product of human ingenuity.... His discovery is not nature's handiwork, but his own; accordingly it is patentable subject matter.12 In *Chakrabarty*, the Supreme Court further pointed out that "anything under the sun made by man" is patentable subject matter.13 Therefore, if a product of nature is new, useful and nonobvious, it may be patented if it has been fashioned by humans, such as in genetic engineering.

2. Plants

Plant inventions are patentable subject matter in the United States. Newly invented plants that are either asexually or sexually reproduced are also protected under the 1930 Plant Patent Act and Plant Variety Protection Certificate (PVPC) in the 1970 Plant Variety Protection Act.14

3. Animals

The question of whether multicellular animals could be patented was examined in the 1980s. In *Ex Parte Allen*, the key issue was the patentability of polyploid pacific coast oysters that had an extra set of chromosomes.15 This new, sterile oyster was edible all year round because it did not devote body weight to reproduction during the breeding season. The applicant sought to patent a method of inducing polyploidy in oysters as well as the resulting oysters as products-by-process. Following the reasoning in *Chakrabaty*, the United States Patent and Trademark Office (USPTO) concluded that such organisms were eligible for patenting.16 It found this particular type of pacific coast oyster to be obvious, however, and thus rejected the patent application. Nonetheless, the polyploid oyster paved the way for the patenting of other non-naturally occurring animals. Shortly after the *Allen* decision, the USPTO issued a notice declaring that it would consider non-naturally occurring, non-human multicellular living organisms, including animals, to be patentable subject matter within the scope of the Patent Act.17 In 1988, for example, Philip Leder and Timothy Stewart were granted a patent on transgenic non-human mammals (U.S. Patent No. 4,736,866) that covered the so-called "Harvard Mouse," which was genetically engineered to be a model for the study of cancer.

4. NATURAL COMPOUNDS

Natural compounds, such as DNA and protein, are not themselves living, but naturally occur in nature.18 Under U.S. patent law, they can be patented only if they are new and purified from nature. Therefore, a compound that is isolated away from a fruit, or a protein that is purified away from an animal can be patented in its purified state. However, such a patent will not cover the fruit or the animal.

The ability to isolate genes and produce the proteins they encode has enormous commercial impact. The availability and scope of patent protection on genes and genome-related technologies is considered vital for the survival and success of the biotechnology industry. Patents provide the opportunity to recoup the investment required to discover and develop the patented product, to fund future research and development projects, as well as to generate financial reward for investors. For example, on March 14, 2000, $10.4 billion was wiped out from the stock market in 10 minutes after speeches about the human genome project by Bill Clinton and Tony Blair were live-broadcasted. The speeches generated panic among investors because they misinterpreted them to mean that DNA and gene-related patenting would be prohibited. Consequently the stocks of a variety of biotech companies, such as Human Genome Science and Celera Genomics, were crushed.19

DNA sequences are considered chemical compounds by the USPTO and are patentable as compositions of matter.20 Although patent claims to naturally occurring DNA sequences might be expected to trigger the "products of nature" rule, courts have upheld patent claims covering "purified and isolated" DNA sequences as new compositions of matter resulting from human intervention.21 In its "Utility Examination Guidelines," the USPTO explains that an isolated and purified DNA molecule that has the same sequence as a naturally occurring gene is eligible for patent protection:

(1) An excised gene is eligible for a patent as a composition of matter or as an article of manufacture because that DNA molecule does not occur in that isolated form in nature; or (2) Synthetic DNA preparations are eligible for patents because their purified state is different from the naturally occurring compound.22

The USPTO guidelines heavily emphasize the patentability of DNA and DNA-related material. In rejecting a series of public comments that genes should not be patentable, the PTO explained that isolated and purified DNA is patentable because this form differs from the naturally occurring compound:

An inventor's discovery of a gene can be the basis for a patent on the genetic composition isolated from its natural state and processed through purifying steps that separate the gene from other molecules naturally associated with it. If a patent application discloses only nucleic acid molecular structure for a newly discovered gene, and no utility for the claimed isolated gene, the claimed invention is not patentable. But when the inventor also discloses how to use the purified gene isolated from its natural state, the application satisfies the "utility" requirement....Like other chemical compounds, DNA molecules are eligible for patents when isolated from their natural state and purified or when synthesized in a laboratory from chemical starting materials.

A patent on a gene covers the isolated and purified gene but does not cover the gene as it occurs in nature. Thus, the concern that a person whose body 'includes' a patented gene could infringe the patent is misfounded. The body does not contain the patented, isolated and purified gene because genes in the body are not in the patented, isolated and purified form. When the patent issued for purified adrenaline about one hundred years ago, people did not infringe the patent merely because their bodies naturally included unpurified adrenaline.23

B. EUROPEAN PATENT OFFICE (EPO)

There are three milestones in European patent legislation history: the conclusion of the Paris Convention for the Protection of Industrial Property in 188324, the passing of the Strasbourg Convention on the Unification of Certain Points of Substantive Law on Patents for Invention in 196325, and the rectification of the European Patent Convention in Munich in 1973.26 Appreciating that international protection for valuable intellectual property rights was requisite to growing international industrialization, the leading European countries of the time formulated the Paris Convention for the Protection of Industrial Property in 1883. The treaty required signing parties to (1) treat foreign patent owners as domestic patent holders and (2) afford international priority dates to member countries.27 The Strasbourg Convention on the Unification of Certain Points of Substantive Law on Patents for Invention in 1963 was part of the effort towards the establishment of a common market in Europe, and it harmonized the terms of substantive patent law, including novelty and inventive step.28 In 1973, the European Patent Convention (EPC) organized to establish a common system for granting patents in Europe.29 EPC covers both formal and material aspects of patent law and regulates the filing and granting process of common European patents. Currently there are 20 Member States (the 15 EU countries plus Cyprus, Switzerland, Liechtenstein, Monaco and Turkey). Supervised by the Administrative Council, the European Patent Office (EPO) is the administrative body of the EPC responsible for granting European patents.

Two provisions of the EPC are relevant when considering the patentability of DNA and biotechnology inventions. Article 53(a) denies patentability to “inventions the publication or exploitation of which would be contrary to ‘ordre public’ or morality, provided that the exploitation shall not be deemed to be so contrary merely because it is prohibited by law or regulation in some or all of the Contracting States.”30 Article 53(b) provides that patents shall not be granted for “plant or animal varieties or essentially biological processes for the production of plants or animals,” however the provision does not apply to “microbiological processes or the products thereof.”31 Nevertheless, despite these provisions, the EPO started granting patents on plants and animals in the early 1990s.

In 1995, Greenpeace brought a case against a patent on plants incorporating a transgene conferring herbicide resistance granted to Plant Genetic Systems. While the EPO’s Technical Board of Appeal did not uphold any of Greenpeace’s arguments on the morality point, it did confirm in its ruling that plant varieties could not be patented.32 Consequently, patenting on animals and plants was halted.

In 1998, the EU adopted the European Directive of the European Parliament and of the Council on the Legal Protection of Biotechnological Inventions (“Directive”) requiring that its member states harmonize their laws relating to the patenting of biotechnological inventions.33 The Directive is divided into five chapters. Chapters I and IV concern matters of patentability. Chapters II and III concern matters of scope and infringement. The last chapter, Chapter V, concerns formal issues relating to the Directive’s implementation and review of its terms. The major features of the Directive are summarized below.

First, inventions that meet the EPC’s definition of invention are patentable “even if they concern a product consisting of or containing biological material or a process” so long as the patent is directed to the material isolated from the natural environment or the material was produced by means of a technical process.”34 Additionally although the EPC’s prohibition on the patenting of plant and animal varieties remains intact, plants or animals inventions shall be patentable if the technical feasibility of the invention is not limited to a particular plant or animal variety.35

Second, for the patentability of naturally-occurring genes, the Directive reaffirms the long-standing practice of the EPO and most national patent offices that naturally-occurring substances are considered to be patentable inventions provided they are isolated from their surroundings. In addition, “a mere DNA sequence without indication of a function does not contain any technical information and is therefore not patentable . . .. The human body, at the various stages of its formation and development, and the simple discovery of one of its elements, including the sequence or partial sequence of a gene, cannot constitute patentable inventions.”36 However, “an element isolated from the human body or otherwise produced by means of a technical process, including the sequence or partial sequence of a gene, may constitute a patentable invention” even though its structure is identical with that of a natural element.37

In addition, certain inventions are excluded from patentability on the basis that they infringe the EPC’s prohibition on patents for inventions whose exploitation is contrary to *ordre public* or morality, namely:

- processes for cloning human beings;

- processes for modifying the germ line genetic identity of human beings;

- uses of human embryos for industrial or commercial purposes; and

- processes for modifying the genetic identity of animals which are likely to cause them suffering without any substantial medical benefit to man or animal, and also animals resulting from such processes.38

Although the EPC is not created by the EU and as such, directives of the EU do not have any binding effect on the EPO, the Administrative Council of the EPO decided to incorporate the provisions of the EU Directive into their Implementing Regulations by adding a new Chapter VI entitled "Biotechnological Inventions" in Part II of the EPC Implementing Regulations in 1999.39 The new provisions, Rules 23b to 23e, were enacted on September 1, 1999, and they implemented the requirements of the EU Biotechnology Directive in European patent law.40 The new rules are summarized as follows:

- For patents concerning biotechnological inventions, including DNA patents, Directive 98/44/EC shall be used as a supplementary means of interpretation for the relevant provisions of the EPC.41

- The definition of biotechnological invention, according to Rule 23b, is invention that concerns "a product consisting of or containing biological material or a process by means of which biological material is produced, processed or used." This includes DNA-related inventions, such as an isolated DNA fragment and the gene it encodes or DNA sequence analysis protocols and its software products The definition of biological material is "any material containing genetic information and capable of reproducing itself or being reproduced in a biological system." For example, plasmid, which is simply a piece of DNA containing a group of genes which cannot reproduce by itself, is considered biological material under this definition because it can be reproduced in a biological system, such as bacteria.42

- The term "essentially biological" which appears in the prohibition of plants or animals produced by an "essentially biological process" is defined as consisting of entirely natural phenomena, such as crossing or selection. This narrow definition of "essentially biological" makes it possible for patenting genetically modified plants or animals since genetic modification is not a process consisting of "entirely natural phenomena."43

- Rule 23c states that inventions concerning biological materials, such as DNA, microbiological process, plants, and animals are patentable. It indicates, however, that inventions concerning plants or animals are patentable only if "the technical feasibility of the invention is not confined to a particular plant or animal variety."44 In the case of biological materials, such as DNA and protein, they are patentable if the materials are isolated from its natural environment or produced by means of a technical process.45 Rule 23e further pronounces that the simple discovery of one of the elements of the human body, including the sequence or partial sequence of a protein or a gene, cannot constitute patentable inventions.46 In any case, the industrial application, i.e. utility, of the claimed gene or protein sequences or a partial sequence must be disclosed in the patent application.47

Since the Implementing Regulations parallel the EU Directive concerning patents on living organisms, they also now stand in conflict with the text of the EPC concerning the patenting of plant varieties and animals. There is a clear provision in the EPC that says that the treaty language of the EPC takes precedence over the Implementing Provisions.48 In addition, the Administrative Council has no legal authority to adopt substantive changes to the patent law. Despite this, however, the EPO has again started to grant patents on living organisms as of September 1, 2000.

In November 2000, the EPC Diplomatic Conference of the Governments met in Munich, Germany. It is the highest legislative body of the EPC and it has the authority to overrule the decision of the Administrative Council. Nevertheless, the Conference did not address the patentability of living organisms. Instead, it "urge[d] the EPO to give priority to preparing for another Diplomatic Conference which might deal with consideration of how provisions on subjects such as biotechnological inventions should be most appropriately included in the EPC."49

C. Japan

The patenting of plants in Japan started in 1978 after the Seeding Law was enacted in conformity with the UPOV Convention.50 Following the U.S. Supreme Court indecision in *Chakrabarty*, the Japanese Patent Office (JPO) started granting patent protection for microorganisms in 1981.51 Animals became patentable subject matter in Japan after 1988 when the so-called "Harvard Mouse" patent was issued by the USPTO.52 By the end of 1998, seven plant variety patents, nineteen animal patents, and a large number of microorganism patents were issued by the JPO. The majority of them were the products of genetic engineering.53

In Japan, Article 32 of the Patent Law provides that “inventions liable to contravene public order, morality or public health shall not be patented . . ..”54 In contrast to the situation in Europe where inventions such as DNA, genes, or transgenic animals/plants, have become very problematic in this respect, there are very few cases, if any, where problems regarding public order or morality or public health have been raised in Japan.

In 1997, the JPO published its Implementing Guidelines for Inventions in Specific Fields (“Guidelines”).55 Chapter 2 of the Guidelines is entitled “Biological Inventions.”56 According to the Guidelines, inventions in the DNA and biotechnology field can be divided into four categories: genetic engineering, microorganisms, plants and animals.57 “Inventions relating to genetic engineering include those of a gene, a vector, a recombinant vector, a transformant, a fused cell, a protein which [is] obtained by transformation (hereinafter, referred to as “a recombinant protein”), [and] a monoclonal antibody, etc.”58 Inventions related to microorganisms include “microorganisms *per se* as well as those related to the use of microorganisms, etc”59 Inventions related to plants include “inventions of plants *per se*, those relating to parts of plants (*e.g.*, a fruit), those of a process for creating plants, those relating to use of plants, etc.”60 Inventions related to animals include “inventions of animals *per se*, those relating to parts of animals, those of a process for creating animals, those relating to use of animals, etc.”61

The JPO also points out that since “the aim of the patent law is to develop industries, only inventions that are useful or having industrial applicability are patentable.”62 Although it is uncommon for an ordinary invention to face questions about its industrial utility, quite frequently, DNA-related inventions encounter these sorts of concerns. This is regularly an issue involving the patentability of inventions of the express sequence tags (ESTs) and single nucleotide polymorphisms (SNPs), since their specific functions are often unclear or unknown, except that they can be utilized as a probe. However, the JPO has clearly stated that any EST invention is not patentable for lacking industrial utility if their functions are indefinite.63 Issues related to DNA fragments and ESTs are further discussed *infra*.

III. Basic Requirement for Patentability

A. The Utility of DNA and Biotechnology Inventions

1. The Utility Examination Guidelines of the USPTO

i. Case Study: ESTs

An EST is part of a sequence from a cDNA molecule, therefore,it can be used to identify and locate an expressed gene. The patenting of ESTs proved to controversial since NIH first filed patent applications on a large number of ESTs in 1991 and 1992.64 According to the 1995 version of the Utility Examination Guidelines65, the USPTO used a two-prong test to determine utility of invention: (1) Is the described utility specific to a particular purpose?

(2) Is the described utility credible?66

In 1997, the Clinton Administration announced that the PTO would begin allowing patents on ESTs based on their utility as probes. On October 6, 1998, the first ‘EST patent’, “Human Kinase Homologs” (U.S. Patent No. 5,817,479), was issued to Incyte Pharmaceuticals, Inc., that as of late 1998, had alone filed patent claims encompassing over 1.2 million DNA sequences, many of human origin.67 In fact, by the end of 2000, the USPTO had received patent applications on millions of gene fragments; one application alone covering more than 20,000.68 Though the content of these applications isn’t public, their sheer numbers suggest that every human gene, at least in part, might already be subject to a patent application.

The patentability of ESTs has been challenged by a variety of societies like The Human Genome Organization (HUGO), which advocates three view points. First, ESTs are obvious and the creation of ESTs does not involve any inventive step. The current strategy of large-scale EST sequencing represents a useful but straightforward extension of a technique that has been in use on a smaller scale for years. The scientific work involved in generating ESTs is straightforward and based on automated sequencing technology that has been well understood since the mid-1980s. Indeed, the sequencing of any gene involves the sequencing of individual, small fragments. Moreover, the sequencing of fragments of genes has long been used as a rapid tool for the characterization of genes encountered in a variety of settings, including library screening.69

In addition, HUGO also believes that ESTs lack both substantial and credible utility. The process from EST to full-length cDNA or genomic sequence is not straightforward. The full-length cDNA represents the entire sequence of the mRNA and the genomic sequence of the gene also includes introns and other flanking regions. Though using partial gene sequences, such as ESTs, to find full-length cDNA and genomic sequences is an important research activity which is routinely performed in many laboratories, it still remains a task that is troubled with uncertainty. HUGO has been quoted as follows:

In some cases known techniques such as specific primer extensions may be successful; in others extraordinary skill will be required to overcome obstacles such as secondary structure. Foreseeable obstacles include the difficulty or impossibility of cloning mRNAs that are large or that encode poorly clonable sequences; the problems posed by immature, or incorrectly or alternatively spliced messages; the difficulties posed by cross-hybridization among members of gene families; [and the rare but extremely challenging problems posed by post-transcriptional alterations of RNA sequence.] Having an EST in hand does not guarantee insight into a practical or feasible strategy for overcoming these obstacles. The effort involved may range from a matter of weeks (in case of an extremely short, easily cloned gene) to more than a year.70

Finally,HUGO asserts it is easy to give a list of potential uses without knowledge of their true biological functions, such uses including:

- categorizing genes according to their expression profile;
- developing markers for mapping, tissue typing, individual/forensic identification;
- producing antibodies;
- generating antisense DNA; and
- locating chromosomal regions associated with genetic disease.71

The "real world" application is hard to achieve without the investment of considerable further effort and creativity, far more than that invested in finding the initial fragment. For example, in order to use DNA fragments for individual identification, one must first find sites of polymorphic variation and identify the distribution of such polymorphisms in appropriate populations. Similarly, to use DNA fragments for tissue typing, one must first establish that a particular fragment or set of fragments provides a sufficiently discriminating signature of a particular tissue type or state. Mapping a sequence may sometimes be routine, but in other cases it may involve overcoming problems posed by gene families, pseudogenes, and repetitive elements which lead to mapping ambiguities due to signals from multiple locations. Moreover, with antisense applications, it is easy to postulate such uses, but scientists would not pursue them without specific and detailed knowledge of biological function. Each of these asserted uses may not be carried out without considerable further effort and additional biological information not apparent from the information inherent in the sequence alone.72

Many other commentators agreed with HUGO, stating that sufficient patentable utility is not shown when the sole disclosed use of an EST is to identify other nucleic acids whose utility was not known, and the function of the corresponding gene is not known. Some commentators suggested that PTO examination procedures would result in granting patents based on non-specific and nonsubstantial utilities, contrary to established case law.73

In early 2001, the USPTO published its new "Utility Examination Guidelines."74 The Utility Guidelines are applicable to all areas of technology, however, they are particularly relevant in areas of gene-related technologies. While the utility requirement is not frequently a focus in many technology areas, it has been for DNA and biotechnology inventions, as the utility of a specific gene or DNA sequence often remains unknown until the gene's function has been characterized and the activity of its product determined. Under the new utility guidelines, the USPTO moves to a four-prong test for utility:

1. Does an invention have a well-established utility?
2. Does an invention have a specific utility?
3. Does an invention have a substantial utility?
4. Does an invention have a credible utility?75

Under the new Guidelines, the USPTO re-affirmed that ESTs are patentable subject matter.76 If an EST meets the statutory requirement on utility, novelty, unobviousness and enablement, it is patentable. Nevertheless, a mere assertion of the utility of an EST as a probe without further disclosure of its specific function is considered not enough by USPTO to satisfy the utility and enablement requirements.77 The patentability of ESTs and DNA fragments has been further studied by the Trilateral Patent Offices (USPTO, EPO, JPO). The conclusions of Trilateral Project B3b, Comparative Study on Biotechnology Patent Practices (Theme: Patentability of DNA Fragments) can be summarized as follows:

(1) A mere DNA fragment without indication of a function or specific asserted utility is not a patentable

invention[;] (2) A DNA fragment, of which specific utility, e.g. use as a probe to diagnose a specific disease, is disclosed, is a patentable invention as long as there [are] no other reasons for rejection[;] (3) A DNA fragment showing no unexpected effect, obtained by conventional method, which is assumed to be part of a certain structural gene based on its high homology with a known DNA encoding protein with a known function, is not a patentable invention (EPO, JPO). The above-mentioned DNA fragment is unpatentable if the specification fails to indicate an asserted utility (USPTO)[; and] (4) The mere fact that DNA fragments are derived from the same source is not sufficient to meet the requirement for unity of invention.78

As a result of the Trilateral Technical Meeting in June, 2000, the following conclusions were added to the final report of the project:

(1) All nucleic acid molecule-related inventions, including full-length cDNAs and SNPs, without indication of function or specific, substantial and credible utility, do not satisfy industrial applicability, enablement or written description requirements[; and] (2) Isolated and purified nucleic acid molecule-related inventions, including full-length cDNAs and SNPs, of which function or specific, substantial and credible utility is disclosed, which satisfy industrial applicability, enablement, definiteness and written description requirements would be patentable as long as there is no prior art (novelty and inventive step) or other reasons for rejection (such as, where appropriate, best mode [US] or ethical grounds [EPC/JP]).79

ii. The utility requirement

An invention has a well-established utility if a person of ordinary skill in the art would immediately appreciate why the invention is useful based on the characteristics of the invention. Well-established utility does not encompass any ‘throw away’ utility that one can dream up for an invention or a non-specific utility that would apply to virtually every member of a general class of materials, such as proteins or DNA. The utility requirement is met when a DNA-related invention has well-established utility.80 Well-established utility is satisfied where the utility is specific, substantial and credible.81

Specific utility means a utility that is *specific* to the subject matter claimed. This contrasts with a *general* utility that would be applicable to the broad class of the invention.82 For example, a claim to a DNA fragment whose use is disclosed simply as a “gene probe” or “chromosome marker” would not be considered specific in the absence of a disclosure of a specific DNA target.83

Substantial utility is a utility that relates to a “real world” use. Utilities that require carrying out further research to identify or reasonably confirm a practical application or use are not substantial utilities.84 For example, both a therapeutic method of treating a known or newly discovered disease and an assay method for identifying compounds that themselves have a substantial utility define a “real world” use. The Guidelines illustrate that substantial utility is not present in any of the following examples: basic research such as studying the properties of a claimed product or the mechanisms in which the material is involved; a method of treating an unspecified disease or condition; a method of assaying or identifying a material that itself has no specific, substantial and credible utility; a method of making a material that itself has no specific, substantial and credible utility; or a claim to an intermediate product for use in making a final product that has no specific, substantial and credible utility.85

Finally, an assertion of utility is credible, or in other words believable to a person of ordinary skill in the art based on the totality of evidence, unless the logic underlying the assertion is seriously flawed, or the facts on which the assertion is based are inconsistent with the logic underlying the assertion. Credible utility is assessed from the standpoint of a person of ordinary skill in the art, that is, whether they would accept that the invention is currently available for such use according to the disclosure of the application.86

2. EPO

According to the EPO, utility is defined as industrial applicability, which includes any kind of industry, such as agriculture.87 In the case of DNA patents, EPO requires that the specific industrial application of a DNA sequence or a partial DNA sequence of a gene must be disclosed in the patent application. Inventions which merely display nucleic acid sequences without clear indication of a function are not considered patentable inventions.88 For example, in cases where a DNA sequence of or partial sequence of a gene is used to produce a protein or part of a protein, it is necessary to specify which protein or part of a protein is produced and what is the function this protein or part of a protein performs.89 If the identity and function of the protein is based on the homology search but not direct experimental data, then the function of the claimed nucleotide sequence and the protein it encodes should be certain to the degree that a specific utility for the claimed sequence becomes apparent beyond speculation.90

3. JPO

In Japan, utility means industrial applicability as prescribed in the main paragraph of Article 29(1) of the Japanese Patent Law,91 which states, "Any person who has made an invention which is industrially applicable may obtain a patent therefor."92 Any invention lacking this requirement is deemed unpatentable.

DNA fragments, genes, and recombinant proteins are considered to be chemicals by the JPO.93 Examination practice regarding the requirement for industrial applicability of conventional-type chemicals requires that at least one use be described in the specification as filed. However, clear demonstration of the use is not necessary. Where there is disclosure from which a specific use of a DNA-related invention can be expected or predicted, the industrial applicability requirement is satisfied. With regard to transgenic animals and plants, the requirement for industrial applicability, as well as the how-to-use requirement will rarely become problematic, because their use is more often obvious.

B. The Novelty of DNA and Biotechnological Inventions

1. Novelty Issues Particular to Biotechnology Invention

In the field of biotechnology invention, the issue of novelty often is combined with the issue of patentable subject matter. The "Product of Nature" doctrine creates an important restriction particularly in biotechnology, because biotechnology products and processes may be derived from the duplication of compounds found in living organisms or produced by naturally occurring animals or plants.94 If it is accepted that transgenic plants and animals, modified microorganisms and isolated and purified DNA sequences are the results of human intervention and that they are patentable subject matter, naturally, one might advocate the view that they are "new" in the sense of having no previous existence in the state of the art.

2. Novelty and DNA Fragments

ESTs, SNPs and partial gene sequences, once isolated, characterized and made available to the public, form a part of the state of the art, in the same way as any other chemical. Just as one chemical may not destroy the novelty of a different chemical; ESTs, SNPs, or partial gene sequences will not destroy the novelty of full-length gene sequences. Similarly a full-length gene sequence forming a part of the state of the art is not "novelty destroying" to a section of the full length DNA.95

For instance, in the "Biotechnology Comparative Study on Biotechnology Patent Practices Comparative Study Report," authored by the USPTO, EPO and JPO, the following case is presented.96 The prior art (Y) is a structural gene encoding a functional polypeptide, the whole sequence of which is disclosed. The claimed invention (Y') is a partial DNA fragment of Y. Does the claimed invention (Y') have novelty over the prior art (Y)? The three Offices present a generally similar result, which is that inventions that relate to a partial sequence will fall within the scope of novelty when the invention "has not been disclosed in concrete terms in publicly known literature."97 The DNA fragment is an isolated compound that is different from the full-length gene compound. Because the DNA fragment and the full-length gene are different compounds, the full-length gene sequence forming part of the state of the art is not novelty destroying to the DNA fragment. However, the USPTO, for example, further states, "the claimed fragment could lack novelty if the fragment were claimed using open ended language such as 'comprising.'"98

C. The Inventive Step of DNA and Biotechnology Inventions

Instead of focusing on the obviousness issue of the sequence itself, early DNA patent cases in the United States, for example, focused on the obviousness of the method used to isolate the DNA sequence.99 However, in the case of *In Re Bell*,100 the Court of Appeals for the Federal Circuit ("Federal Circuit") focused on the structure of a DNA sequence rather than on the method used to obtain the sequence.101 The USPTO argued that, once a portion of the amino acid sequence is known, the method for isolating DNA sequences that encode a given protein is obvious; simply prepare and utilize nucleotide probes based on the amino acid sequence to isolate the full-length DNA. Thus, the entire nucleotide sequence of the gene would be *prima facie* obvious when the amino acid sequence for that gene could be found in the prior art.

The Federal Circuit disagreed, commenting that the established relationship in the genetic code between a nucleic acid and the protein it encodes does not necessarily cause a gene to be *prima facie* obvious over its corresponding protein, because there are an enormous number of nucleotide sequences that might encode for a specific protein as a result of degeneracy in the genetic code.102 The court further pointed out that the USPTO's focus on Bell's method is flawed. Instead, the USPTO should focus on the obviousness issue of the claimed nucleic acid.103 In the case of *In Re Deuel*,104 the Federal Circuit underwent detailed analysis, reasoning that a prior art disclosing the amino acid sequence of a protein does not automatically make the particular DNA molecules encoding the protein obvious. As in *In re Bell*, the Federal Circuit stated that the USPTO's rejection on the basis of *prime facie* obviousness is clearly misplaced because a vast number of DNA sequences could be deduced from the known protein sequence as a consequence of the redundancy of the genetic code.105 The existence of a general method of gene cloning in the prior art is not sufficient, without more, to render obvious a particular cDNA molecule either.106

In the JPO, DNA fragments, genes, recombinant proteins, and the like, are considered chemicals.107 The JPO examines the obviousness of gene-related inventions based on its "obvious-to-try" test. The JPO's practice of applying the obvious-to-try test is substantially the same as the EPO's practice. This is in complete contrast, however, to the US practice of applying the test of structural obviousness to genes and gene fragments as in *In re Deuel*. The JPO, however, has not officially made clear any reasonable ground for assessing obviousness of gene-related substances on the basis of the obvious-to-try test. Also, there is also a lack of Japanese judicial precedent that supports this method of assessment.

The sources of naturally occurring DNA are often restricted to known or readily expected sources (or screening sources), such as specific human organ cells and genes encoding specific proteins. Generally, the processes for obtaining the subjects are completely standardized, for example, isolation of a subject by a probe and sequencing by a sequencer. Thus, with respect to naturally occurring DNA, a "presumption of obvious-to-try with reasonable expectation of success" is applicable. This presumption is often applied to recombinant proteins encoded by the above-described naturally occurring DNA. Consider the following example:

1. Where protein A is publicly known but its amino acid sequence is not publicly known, an invention of a gene encoding Protein A does not have an inventive step, provided that a person skilled in the art could determine the amino acid sequence easily at the time of filing. However, when it is considered that the gene is specified by a specific base sequence and has advantageous effects that person skilled in the art cannot foresee in comparison with other genes having a different base sequence encoding the Protein A, the invention of the said gene has an inventive step.

2. When an amino acid sequence of Protein A is publicly known, an invention of a gene encoding the Protein A does not have an inventive step. However, when it is considered that the gene is specified by a specific base sequence and has advantageous effects that a person skilled in the art cannot foresee in comparison with other genes having a different base sequence encoding the Protein A, the invention of the said gene has an inventive step.

3. When a structural gene is publicly known, an invention related to a structural gene of naturally obtainable mutant (allelic mutant, *etc.*) of the said publicly known structural gene and which is derived from the same species as the said structural gene and has the same properties and functions as the said structural gene does not have an inventive step. However, if the claimed structural gene has advantageous effects that a person skilled in the art cannot foresee in comparison with the said publicly known structural gene, the claimed invention of the structural gene has an inventive step.108

The denial of inventive step is based on the concept that if the amino acid sequence of protein A is known, it would be easy to try to isolate and sequence of a specific gene coding protein A by means of standard cloning procedures. The main reason for the JPO's adoption of this standard might likely be ascribed to the fact that under the present technical standard, once the amino acid sequence of protein A is known, it would reasonably be expected to find out the target gene.109 Notably, the EPO has a similar policy to the JPO where, under the premise of a reasonable expectation of success, the denial of inventive step is based on the "obvious-to-try" standard.110

D. The Written Description Requirement

In the United States, for example, the Patent Act embodies a written-description requirement to ensure that an applicant has actually invented what is claimed and that the public will be in possession of the claimed invention after the expiration of the patent.111 The new guidelines issued by the USPTO, the Guidelines for Examination of Patent Applications Under the 35 U.S.C. § 112, 1 "Written Description" Requirement, set forth the methodology for determining the adequacy of a written description.112

For each claim, the examiner should first determine what the claim as a whole covers and give the claim its broadest reasonable interpretation.113 The entire patent application is then reviewed to understand how the applicant provides support for each element of the claimed invention and determine whether the applicant has demonstrated possession of the claimed invention. Such a review is conducted from the standpoint of one of skill in the art at the time the application was filed. Information that is well known in the art need not be described in detail in the specification.114

The Examiner should determine whether there is sufficient written description to inform one reasonably skilled in the art that the applicant was in possession of the claimed invention as a whole at the time the application was filed.115 This may be shown in a number of ways, including describing an actual reduction to practice of the claimed invention; that is, by showing that the inventor produced an embodiment or performed a process that met all the limitations of the claim and that the invention worked for its intended purpose. Sufficient written description can also be shown by disclosing drawings or structural chemical formulas, so long as they enable one skilled in the art to practice the invention.116 To this end, the Written Description Guidelines state that "[d]escribing the complete chemical structure, i.e., the DNA sequence, of a claimed DNA is one method of satisfying the written description requirement, but it is not the only method[;]…there is no basis for a per se rule requiring disclosure of complete DNA sequences or limiting DNA claims to only the sequence disclosed (emphasis added)."117

IV. Strategic Utilization of DNA-Related Patents

The utilization of DNA and DNA-related patents is quite a complicated issue. The global marketplace is more and more an information economy. Traditionally, companies were valued primarily on the basis of their physical assets, including tangibles such as cash, manufacturing plants, inventory, land holdings, and mineral rights. However, it is increasingly common to find that the primary asset of a contemporary company is its intellectual property. This is especially true for the biotech start-ups, such as functional genomics and bioinformatics firms. The relevant question becomes how can an owner of DNA patents, such as a small bioinformatics company, a pharmaceutical giant, or a public institute, create, protect, and extract value from these intellectual assets?

For high-tech companies like functional genomics firms, successful business depends on strategic intellectual property management ("SIPM"). SIPM can be defined as a system consisting of the following three interdependent functions: (1) planning and acquiring; (2) organizing and protecting; and (3) extracting value.118 Product development in the biotech industry is often a lengthy process, thereby affording potential competitors abundant opportunities to enter the market and compete. A well-managed DNA patent portfolio can create barriers to entry that discourage competitors and greatly slow or even halt competition, providing time for further research and development.119 Another advantage of SIPM is that a strategically constructed DNA patent portfolio will place a company in a better position to attract investment or acquisition, since investors are generally more willing to invest in a company with a strategic technological edge over its rivals.

Strategic planning should start even before the patent application itself. Since a patent application is lengthy and expensive, usually taking approximately 3 years and costing upwards of $15,000 (for a U.S. patent, for example), a biotech company may want to assess its current state of research and development to identify the key technologies it intends to protect. This planning should include an analysis of its current intellectual property inventory in the context of well-defined business objectives. The main questions a company should ask itself at this stage include whether it should focus on expanding new products or protecting existing ones and whether specific patent applications would create market barriers to competition.120 In fact, a common strategy in the field of genomics is to acquire substantial patent portfolios, even if the patents are not strong in the traditional sense, so that competitors are discouraged from taking similar products to market.121 Furthermore, in deciding which core intellectual property to protect, decision-makers should also take into account market demand. An intellectual property strategist should let the market control the direction of the planning and construction of the patent portfolio. In addition, third-party patent positions must be identified and thoroughly reviewed to determine the potential for blocking patents and "licensing-in" opportunities.

A well-planned DNA patent portfolio cannot function well without diligent organization and protection. The stakeholder should perform diligent record-keeping practices and routine, vigilant surveillance of the activities of competitors and other third parties for potential patent infringement. Thorough due diligence should be conducted before patents are licensed, including a close evaluation of patent claims.122 Patents holders must also maintain and archive all invention records related to the DNA patents, such as laboratory notebooks, because these constitute critical evidence of invention. The information of all inventors and other employees involved in the research and development processes should be updated regularly because they are potential witnesses in any potential litigation. Furthermore, there are sometimes disastrous consequences of omitting an inventor in a patent application.123

Patent infringement, in the U.S. for example, results from using, making or selling a patented invention without authorization, from contributing to another's infringement, or from inducing a third party to infringe. It is not uncommon to unknowingly infringe upon another's patent, as knowledge of the patent is not a prerequisite to infringement. To reduce this risk, companies should conduct an extensive search of all issued patents. Alternatively, if an extensive search is cost prohibitive, then a search should be conducted of competitors' patents before exploiting a new technology or making a new product. For example, a fictional company, Miracle Antibodies, develops humanized antibodies for treating breast cancer patients. Before spending tens, maybe hundreds, of millions of dollars and years on laboratory and clinical research, the company should know whether its future product, Breast Cancer Miracle Antibody, would infringe another's patent. In this hypothetical, the result of a patent search would provide invaluable guidance to the company's decision makers.

The ultimate goal of SIPM is to extract value out of the DNA patent portfolios. Besides the utilization of DNA patents as a barrier to discourage potential competitors, DNA patents can also be utilized to generate value for the patent holders through a number of methods :

- licensing patents that do not match the firm's business objectives and are unlikely to be utilized;124

- cross-licensing with competitor to gain critical market access;125

- using DNA patents as "bargaining chips" for better position when forming strategic alliances;126

- obtaining monetary compensation and stronger market position through infringement litigation against competitors,127 or for companies with substantial patent portfolios of their own, protecting the company from competitor's infringement accusations by establishing counterclaims of infringement by the accuser or offering part of their portfolios for a cross-licensing settlement;128

- donating non-utilized DNA patents to public institutions or other nonprofit institutions for corporate tax deduction benefits and to gain access to the research and talents in those organizations.129

In summary, effective management of a proprietary DNA portfolio is vital to the success of biotech companies. The DNA patent portfolio is a now a key strategic element and the decisions surrounding it must be adeptly and dynamically managed to maximize firm profits. The DNA patent is no longer mere property, but is now the core of modern biotech companies.

END NOTES

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3. *See* HILDRETH, *supra* note 1, at 4-7.

4. *See* HILDRETH, *supra* note 1, at 4-6.

5. *See* 35 U.S.C. §§ 101-103 (2002).

6. *See* 35 U.S.C. § 112 (2002).

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10. *See* 66 Fed. Reg. 1093 (2001).

11. Diamond v. Chakrabarty, 447 U.S. 303 (1980).

12. *Id.* at 309.

13. *Id.*

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52. *Id.*

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54. *See* JAPAN PATENT LAW, Law No. 220 of 1999, ch. II, no. 32, *available at* http://www.jpo.go.jp/shoukaie/patent.htm#32 (last visited May 25, 2003).

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76. *See id* at 1094.

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104. *See* 51 F.3d 1552, 34 U.S.P.Q.2d 1210 (Fed. Cir. 1995).

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106. *See* MANUAL OF PATENT EXAMINING PROCEDURE § 21002144.0900-148 (8th ed. 2001).

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125. *See* Adler, *supra* note 119, at 566.

126. *See* Isacson, *supra* note 118, at 565.

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Fixtures Marketing Ltd v OY Veikkaus AB (Unreported, February 1, 2002) (Finland)

Legislation: European Parliament and Council Directive 96/9 on the legal protection of databases Art.7(1)

Subject: INTELLECTUAL PROPERTY. Other related subjects: Information technology

Keywords: Database right; EC law; Netherlands

Abstract: Discusses whether databases created as a by product of the maker's main activity should be excluded from the protection of database right. Examines the requirement that database makers must show substantial investment in the database to qualify for database right under European Parliament and Council Directive 96/9 (the Database Directive) Art.7. Reviews Netherlands case law, comparing cases from other Member States. Considers the justification for allowing protection in return for substantial investment where the database maker has invested not only in creating the data but also in presenting it in a user friendly format, and how the principle might apply to telephone directories, sports information providers and scientific research.

402 Eight years have passed since the Database Directive was enacted. [FN1] A relatively abundant body of case law [FN2] has now emerged but courts remain divided or uncertain over a number of issues. One of them is the most important question of the protection requirement, the substantial investment. [FN3] In order to protect its database, the database maker must show "that there has been qualitatively and/or quantitatively a substantial investment in either the obtaining, verification or presentation of the contents" (Art.7.1 of the Directive).

In this respect, one crucial question has puzzled the courts—whether so called "spin-off" databases can also benefit from sui generis right protection. Spin-off databases are collections of data which are by-products ("spin-offs") of a main or other activity of the producer [FN4] (such as event schedules, television or radio programmes, train and plane timetables, telephone subscriber data, stock prices, football or horseracing fixtures, [FN5] scientific data resulting from research or experimentation, sports results [FN6]). As can readily be seen, this other or main activity is something other than the making of the database: it is programming television programmes, organising an event, discovering stars, etc. The question is: should these database producers nevertheless be able to claim that the investment made in organising the event, attributing a telephone number or a time to the departure of a plane—in short, in performing the main activity—counts towards making the database? Or on the contrary, do the words "obtaining, verifying or presenting" mean that the investment's aim must be to produce the database? In other words, "does the database right merely protect investments that are directly attributable to producing a database (the so-called 'spin-off doctrine')?" [FN7] Several courts, unsure whether the Directive wished to protect such databases, have asked questions to the ECJ. [FN8]

As can be readily appreciated, the application of the spin-off theory is crucial since it determines the scope of protection. The consequence of adopting the spin-off theory is a lesser protection or in other words a broader public domain. It has been argued that beyond advocating the application of the spin-off theory, if the sui generis right could subsist in novel data which cannot be obtained anywhere else, it would unduly restrict freedom of expression and information. [FN9] After having recalled the origins of the theory, this article will first review how the courts and the literature applied and reacted to the spin-off theory. Following this analysis, several types of data will be identified and the article will determine whether the spin-off doctrine should apply to any of those.

ORIGINS OF THE SPIN-OFF THEORY

The so-called spin-off theory or doctrine most probably originates from the Netherlands. [FN10] During the legislative process preceding the implementation of the Directive into Dutch law, members of parliament asked the Ministry of Justice whether certain databases could be protected. [FN11] The questions related to three imagined cases. In all three cases, the government answered that those databases were not protected by the sui generis right. [FN12] The first example was a database constituted by the list of the Dutch restaurants awarded a Michelin star. Since the investment is directed towards granting the stars and not towards collecting the details of the restaurants, such a list is not protected by the sui generis right. The second example related to a list of newly discovered stars. Again the investment is not directed towards making a list of new stars but at discovering them through a telescope or a journey in space. Finally, ***403** television programmes are no more than a spin-off of the activity of scheduling programmes; they are not protected as a database.

THE CASE LAW

It is no surprise that the case law on the spin-off doctrine is mainly found in the Netherlands. But the spin-off theory has also been discussed, directly or indirectly, in cases in the Nordic countries, France and the United Kingdom.

The Dutch courts are split on whether by-products should be protected by the sui generis right. In several cases, the Dutch courts have validated the spin-off doctrine, stating that such databases have not required a substantial investment. Other courts have rejected the spin-off theory, holding that databases should be protected regardless of the fact they are by-products of another activity.

In two cases concerning telephone directories made by the former Dutch telecommunications monopoly (KPN), the Dutch courts have rejected the spin-off theory. In Denda v KPN, which was decided before the adoption of the Database Act, the Court of Appeal of Arnhem held that the paper version of a telephone guide was the result of a substantial investment. [FN13] The reason is that the Directive does not make a distinction between the primary and secondary exploitation of databases. [FN14] The court of First Instance of Almelo con-firmed this ruling in a later decision on the merits. [FN15] There is no distinction between the subscriber data and the telephone directory deriving from it. Thus KPN's directory was the product of substantial investment. In the second case (KPN v XSO), the President of the Court of First Instance of The Hague held that KPN's telephone guide, which it commercialised on the internet, was protected. [FN16] In this case XSO was providing users with KPN's directory without referring users to KPN's website, therefore bypassing KPN's ads. For the court, the Dutch Database Act aims at protecting such investment notwithstanding the fact that KPN would have invested in the telephone guide even if such investment had not been awarded database protection. [FN17] Certain costs must always be made not only to present the database so that it can be searched by the public on the internet but also to keep it up to date. The court decided that the database was protected. On the other hand, the Dutch competition authority found there was no substantial investment in the publishing of KPN's telephone guide on CD. [FN18]

In a number of cases relating to programming data, news headlines and real estate information, the Dutch competition authority and the Dutch courts have applied the spin-off theory. In De Telegraaf v NOS, [FN19] De Telegraaf had copied program listings on which the NOS argued to hold copyright, and sui generis right, for publication in its weekly television guide. The Dutch competition authority found that there was no substantial investment in the making of television programmes by the Dutch public and commercial broadcasting organisations. [FN20] Programme schedules are by-products of the programme scheduling process. Therefore the broadcasters could not invoke database protection by the sui generis right since there was no substantial investment. [FN21] The case was also in parallel before the civil courts. The Court of Appeal of The Hague, applying the spin-off theory, held that the "broadcasters, whose primary task is to make radio and television programmes, cannot accomplish this task without collecting the data on the programmes and redacting the programme lists" and therefore "the mere editing/redacting of the programmes does not show a (specific) substantial investment in time, money or otherwise." [FN22] The Court of Appeal on this point specifically referred to the Ministry of Justice's statement in support of its findings.

In the Kranten.com case, [FN23] a number of Dutch newspapers were suing Kranten.com, which provided a daily service of newspaper article headings by way of deep links to the newspapers websites. The newspapers argued that they had database rights in their headlines listed on their websites and that Kranten.com's deep ***404** linking was an infringement of the sui generis right in its database. The court held that a list of newspaper article headings on a website does not represent a substantial investment. The publishers' investment is directed towards the gathering of reports and articles to fill the newspapers. The headlines are invented and do not reflect a qualitative investment. In other words, the court does not expressly adopt the spin-off theory but it can be concluded from the judgment that the selection of articles and the drafting of the list of titles to be placed on the websites were a side issue of the business, i.e. publishing printed newspapers. [FN24] The activity did not involve a quantitative investment because the seven persons involved in making the website of those newspapers were considered numerically negligible compared to the total numbers of persons involved in the production of the printed newspapers. [FN25]

The Dutch courts were later confronted with a case involving a website of real estate information. In NVM v De Telegraaf, the website "El Cheapo", maintained by De Telegraaf, browsed, among others, NVM's website, which contains 45,000 properties for sale and is continuously updated. El Cheapo's search results did reproduce the whole of the pages with the entire information which appeared on NVM's website (i.e. the picture of the property, the price, the address and type of property as well as the website it was originating from, i.e. NVM's website) and were copied and presented under El Cheapo's frame. NVM sued De Telegraaf for database right infringement. De Telegraaf disputed that the list of real estates properties for sale represented a substantial investment. The Court of First Instance regarded the collection and daily maintenance of the data as a quantitative substantial investment. [FN26] NVM had invested 24 million in software to update the contents of the database directly. El Cheapo was therefore infringing. The Court of Appeal of The Hague disagreed. [FN27] It referred to the Ministry of Justice's statement that there is no substantial investment if the data are a mere spin-off of the main activities of the producer. In this case NVM had previously set up the database for use in a network and the placing of their database online was considered a spin-off of those previous investments. For the court, the investment in hardware was made for the database as existing in the internal network and did not count towards the web version of the database. Subsequently, the Supreme Court (Hoge Raad) overruled the Court of Appeal's decision and held that the spin-off theory did not apply in that case. [FN28] The Supreme Court stated that the spinoff theory is irrelevant in this connection ("in dit verband"). It held that "neither the Directive nor the text of art.1, a, of the Database Act offers a starting point for the opinion that in case a database is used for several aims, for each of these aims a substantial investment specifically must be shown". [FN29] As Visser notes, in this case, we are not in a "spin-off situation". [FN30] In addition, the Supreme Court suggests that adopting the spin-off theory would lead to considerable difficulties to set boundaries. [FN31] How can a distinction be made between the substantial investment in creating the data on the one hand and in collecting, verifying and presenting them on the other?

Some have argued that the Supreme Court has definitely rejected the spin-off theory. [FN32] However others disagree: the Supreme Court just held that the theory did not apply in this case but has not rejected its validity. [FN33] Thus, for them, the Supreme Court has not rejected the possibility that the required investment might be lacking if no substantial investment directed at the compilation of any database has taken place and a database is just a spin-off of another activity. This may, for instance, be the case with programming data.

A later case has also dismissed the spin-off argument. In Wegener v Hunter Select, [FN34] Wegener, who published job ads, sued Hunter Select for having extracted and reutilised its ads. It lost in first instance. In appeal, the Court of Appeal of Leeuwarden held that Wegener had made a substantial investment in the presentation of the ads in the printed edition. The court was very short on the possible application of the spin-off doctrine. It rejected the spin-off argument developed by Hunter Select that there is no substantial investment because the production of a database of job ads is not the primary aim of the newspaper. Since there was substantial investment in the presentation of the ads, the court did not have to look whether there was a substantial investment in the obtaining of the data.

What do other national courts think? In France, arguments close to the spin-off theory have been invoked by defendants. But the courts have not applied the theory; they have not even uttered the word. Rather they seem to implicitly reject it. In Groupe Miller Freeman v SA Tigest Communication, [FN35] the defendant Tigest claimed that Groupe Miller Freeman's databases (trade fairs ***405** catalogues) were by-products of the activity of organising fairs and could not therefore be protected by the sui generis right. The court held that even if the databases were by-products of the activity of organising fairs by the claimant, these data were still subject to a particular treatment by computer in order to be made available to the public and the investment corresponding to this treatment had to be taken into consideration. The court held that the constitution, verification and updating of the contents of the database of traders is a substantial investment in view of the number of traders for each fair and the need to update it each year. The claimant's database was therefore protected by the sui generis right. This case seems to acknowledge that although there cannot be an investment in collection or verification for spin-off databases, there can nevertheless be a substantial investment in presenting the data.

In appeal, the claimants argued that the databases were the result of commercial efforts to promote the fairs, the establishment of communication plans, the advertising made to provoke the participation of traders and that those efforts gave their content to the database. They justified the investments in personnel and computer services exclusively devoted to the databases by producing the employment contracts and the invoices of services from persons working full time on the constitution and verification of those bases. They argued that the databases are updated and verified constantly, through regular marketing phone calls. They also argued that they had made efforts in presenting and editing the catalogues. Even if the collection and classification of the data are used to make the fair succeed, they necessarily imply an investment, human as well as material, in constituting and verifying the database, which is substantial. Commentators have regretted that the Court of Appeal accepted that the investments in promoting the fairs, not in constituting the database, should be taken into consideration. The sui generis right should not subsist owing to investments which are not directly devoted to the constitution of the base. [FN36] Those commentators are therefore in favour of the spin-off doctrine without stating it expressly.

The Court of Appeal of Paris expressed the same opinion in a subsequent case involving the same claimant and another defendant. [FN37] The computerised treatment, the constant verification and updating of the information which result from a daily intervention of persons who are occupied full time with the quality of files, necessitate financial, material and human investments which confer their substance to the databases. The investments were held substantial and the databases (catalogues) protected. The commercial efforts to promote the fairs, the establishment of communication plans, the advertisement made to provoke the participation of the traders, even if those are linked to the activity of organising fairs, participate directly and narrowly in the conception of the databases; it did not matter that their exploitation is undertaken in parallel with the fairs. This seems close to the implicit statement of the Hoge Raad in NVM v De Telegraaf that it is difficult to make a distinction between investments in creating and investments in presenting the data. A commentator remarked that this conclusion is understandable because without the commercial effort of promoting the fairs, the database would not exist at all; in other words, there would be no data in it. [FN38] The derived and accessory character of the activity is not antagonistic with the existence of a substantial investment as long as it is clearly identified and distinguished. [FN39]

The courts of three Member States (the United Kingdom, Sweden and Finland [FN40]) have been confronted with the question of the application of the spinoff theory and have decided to stay proceedings and ask preliminary rulings to the ECJ. The answer which will be given by the ECJ will determine the validity or invalidity of the theory.

The Swedish reference involves Fixtures Marketing Ltd v AB Svenska Spel. Fixtures Marketing sued Svenska Spel for having used English football fixtures lists for gambling purposes. Both the court of first instance (Gotland City Court) and the Svea court of appeal found there was no infringement on the basis that there had not been an extraction. The court of first instance recognised there was a substantial investment in making the fixtures lists and seemed to reject the spin-off doctrine by stating that it was impossible to draw a line between a preparatory work and the compilation of the database itself. The case came to the Supreme Court, which referred questions to the ECJ. [FN41] The first question concerns the spin-off theory:

"In assessing whether a database is the result of a 'substantial investment' within the meaning of Article 7(1) of ... the database directive can the maker of a database be credited with an investment primarily intended to create something which is independent of the database and which thus does not merely concern the 'obtaining, verification or presentation' of the contents of the database? If so, does it make any difference if the investment or part of it nevertheless constitutes a prerequisite for the database?"

Svenska Spel contends that Fixtures Marketing's investment is primarily concerned with the drawing up of the fixture lists for the English and Scottish football leagues and not with the databases where the data are stored. Fixtures Marketing, for its part, argues that it is not ***406** possible to distinguish the work for the purpose of planning the game and the purpose of drawing up the fixture lists.

This question posed by the Swedish Supreme Court addresses directly the problem faced in the Construct Data Verlag case. Without the commercial effort of promoting the fairs, the database would not exist at all. Therefore should the investment in the primary activity to some extent count towards the constitution of the database?

The second question also relates to the question of substantial investment. "Does a database enjoy protection under the database directive only in respect of activities covered by the objective of the database maker in creating the database?" Svenska Spel contends that Fixture Marketing's creation of the database is not intended to facilitate football pools and other gaming activities but that such activities are a by-product of the purpose of the investment. Fixtures Marketing, on the other hand, argues that the purpose of the investment is irrelevant and disputes that the possibility of exploiting the database for football pools constitutes a by-product of the actual purpose of the investment in the database.

In the Fixtures Marketing Ltd v OY Veikkaus Ab case, similarly to the Swedish case, the Finnish betting agency Veikkaus used information contained in fixtures listings of English Premier League football matches for its betting activities. Fixtures Marketing claimed that its list was the result of substantial investment and that Veikkaus had infringed its database right on it. Veikkaus counter-claimed that the list was a spin-off of activities unprotected by the sui generis right. The court of first instance of Vantaa stayed the proceedings in order to ask questions in this regard to the ECJ. [FN42] The relevant question is phrased as follows:

"May the requirements in art. 7(1) of the Directive for a link between the investment and the making of the database be interpreted in the sense that the 'obtaining' referred to in art. 7(1) and the investment directed at it refers, in the present case, to investment which is directed at the determination of the dates of the matches and the match pairings themselves and, when the criterion for granting protection are [sic] appraised, and does the drawing up of the fixture list include investment which is not relevant [i.e. which cannot be taken into account when the criteria for protection under the sui generis right are being assessed]?" [FN43]

This question in substance asks whether the word "obtaining" also includes the pure creation of data.

The question was answered negatively in the British Horseracing Board v William Hill case. [FN44] The court held that investments in creating data, i.e. generating data in order to organise an event (e.g. a horse race) are not protected by database right. [FN45] In the opinion of the court, this is confirmed by Art.7.4. The judge nonetheless held that the database was protected. This was because a lot of investment went at least into gathering (and also presumably in verifying [FN46] and presenting) the data. Nonetheless the judge noted that "in practice where one person both creates the underlying data and gathers it together, as BHB does, it may be difficult to draw a sharp line between the two activities". [FN47] In its reference for a preliminary ruling, [FN48] the Court of Appeal of England and Wales, like the Finnish court, asks what is meant by "obtaining" in Art.7(1) of the Directive.

In conclusion, with respect to the Finnish, Swedish and British references, the ECJ will have to answer whether the cost of programming an event is to be taken into account as relevant investment or in other words, whether "obtaining" data includes creating data.

THE DOCTRINE

A great number of commentators—mainly Dutch, [FN49] and this is hardly a surprise in view of the origins of the theory—are in favour of the application of the spin-off doctrine. [FN50] Every human activity produces information on the side. Does that mean that there should be a database right on it? As one commentator puts it [FN51]: should parliament acquire database right in the results of its daily voting? Football clubs in their football scores? A cricket player in his batting average? The stock exchange in its stock market prices? An astronomer in the co-ordinates of newly discovered stars?

***407** Several arguments in favour of the spin-off doctrine can be put forward. [FN52] A first argument derives from the rationale of the Directive. The Directive's aim or rationale is to promote investment in databases, encourage the production and dissemination of databases. [FN53] The sui generis right is a right based on utilitarian reasoning. Thus there is no reason to protect databases deriving quasi-automatically from other activities. A second argument is that there must be a direct link between the investment and the resulting database. "For example it would be incorrect to impute the entire annual budget of the Reed Elsevier consortium to the costs of running its Lexis-Nexis database. The costs must be directly attributable to the database to qualify as relevant 'investment'." [FN54] A third argument is based on competition law. The costs incurred in performing the primary activity should be recouped with the same activity. Otherwise consumers would pay twice for the same data. [FN55] However, the same commentators believe that "undertakings should be free to cross-finance their various activities by using the profits made by selling the 'spin-off' to lower the price of its [sic] primary service". [FN56] The fourth argument is based on the wording of the Directive: the investment must be in obtaining, verifying or presenting the data. Obtaining means gathering, collecting the data and not inventing or creating the data from scratch. [FN57] Obtaining an object presupposes the prior existence of this object. [FN58] The fact that the Directive does not refer to creation or invention of data confirms a restrictive reading of the term "obtaining". Recital 19 supposedly also confirms that investment in generating database contents is not to be taken into account. [FN59]

There are three main arguments against the spin-off theory. First, it is difficult to distinguish between creating and obtaining data. Many courts have noted this difficulty and have generally rejected the application of the theory for this reason. [FN60] For instance, is discovering a new star, planet or galaxy creating or obtaining? In addition, the Directive does not make a difference between obtaining and creating elements. [FN61] The second argument is constituted by the inclusion in the initial Directive proposal of a compulsory licence provision for sole source database producers. [FN62] Why did the original proposal include a compulsory licence provision if it is true that created data are not encompassed by the sui generis right? This provision was later withdrawn. The reason appears to be that the Magill case [FN63] was considered sufficient to regulate the problem of abuse of dominant position by sole source database makers. This must mean that the withdrawal of the provision does not change the fact that those producers of data are protected by the sui generis right. Also the majority of lobbyists for the Database Directive were producers of "created" data (e.g. horse racing organisations— such as the French PMU whose members organise horse races—or stock markets). Why would they have lobbied so hard if they could not be protected? The reason for withdrawing the compulsory licence provision might very well be a result of this strong lobbying by those organisations. The reason can hardly be that there was no risk of abuses of dominant positions because those companies were not protected. Thirdly, one will remember that the sui generis right was enacted in reaction to the non-protection by copyright in most Member States of, mainly, telephone directories [FN64] (which are constituted of data deriving from the activity of attributing phone numbers and therefore are par excellence the example of a spin-off database). Why create this right if the makers of these directories cannot benefit from it? It would be ironic if the very object that one historically wished to protect would, by the application of the spin-off theory, not enjoy sui generis right protection. [FN65]

Refining the Spin-off Theory: Differentiating between Several Types of Data

But what is really the spin-off doctrine? And do we really need it? Instead of concentrating on this theory which is endorsed by one government and a few courts only, should we not just interpret the Directive itself to try and find a solution to the problem in question? The answers to these questions are as follows.

The spin-off doctrine is the doctrine under which there should not be protection by the sui generis right for databases which are spin-offs or by-products of another ***408** or main activity. The database right should only protect investments that are directly attributable to producing a database. In other words, when someone creates data it must be with the only aim to make a database. The data must not be just the result of another activity. The question on the other hand is and remains in all situations whether there has been a "substantial investment in either the obtaining, verification or presentation of the contents" (Art.7.1 of the Directive). The argument that will be developed hereunder is that, if the Directive is correctly construed, the spin-off theory hardly needs to apply.

Almost all the decisions reviewed above concern data which have been created by the claimant (telephone directories, newspaper headlines and broadly speaking "event data" (i.e. radio and television programmes, dates and places of football matches and of horse races as well as teams playing or horses running). The Directive states that the substantial investment must be in obtaining, verifying or presenting the data. The crux of the problem is the meaning of the term "obtaining". It is not clear whether the spin-off theory is based on the fact that "obtaining" data means only collecting or gathering them and not creating them. There appears that there is no more refined explanation of the spin-off theory than the one given above (i.e. that databases which are spin-offs or by-products of another main activity should not be protected). Actually it seems that the word "obtaining" is only one argument in favour of the doctrine's application and thus that the interpretation based on the word "obtaining" does not coincide with the underlying rationale for the theory. Rather the theory seems to sweep more broadly in the sense that if the data have been created but there has been a substantial investment in their presentation, the theory might nevertheless apply. [FN66] It is submitted that, in order to determine the cases in which the sui generis right accrues, a distinction must be made between several types of data and several types of situations in which a substantial investment is made. In light of this differentiation, the application of the second (broad) interpretation of the spin-off doctrine [FN67] can be reconsidered rather than what has been so far generally done, i.e. applying it indiscriminately and without really explaining why it should apply. [FN68] The fact that the theory seems to simply apply indiscriminately (because it appears broadly to mean that a database that is the by-product of a main activity is excluded from protection per se) and the related fact that there is no clear explanation to which data the theory applies makes its application uncertain and unworkable. This is why the theory must be refined or else totally abandoned.

Data can be classified in four groups, the last three of which appear "problematic" in view of the Directive's requirements and more generally of intellectual property policy. First, there are pre-existing data, i.e. data collected from pre-existing sources (such as works fallen in the public domain, locations of monuments or restaurants in a town (e.g. compiled in guide books or maps), customer data). Secondly, there are created or invented data. This means data which do not exist before the constitution of the database but are created or invented from scratch by the database maker, thus by man. The third type consists of the same such created data, but which are also presented in a certain way. The fourth type is data which pre-exist in nature but are then collected and recorded. They are not arbitrarily invented or created by man but are simply naturally occurring and are recorded as such accurately by man (e.g. meteorological data, astronomical data and genomic data). Before examining the consequences of the nature of these four types of data, a type of database should be isolated for the character of its database maker.

"STATE" DATABASES

In cases where a particular database has been made by the state, or in any case financed by the state (be it a national or local entity, and be it parliament, executive or judiciary), because of the character of its producer, irrespective of the nature of the data, and notwithstanding that a substantial investment has been made in the obtaining, verification or presentation of the data, the database should not receive protection. The arguments are close to those underlying the spin-off theory. The investment has been recouped; in other words, one should not protect the same object twice. Since the taxpayer has already paid for the data, he or she should not pay a second time. A basis for this argument is not directly apparent in the Directive but it should nonetheless be adopted. As a matter of fact, the Directive requires a substantial investment. But there is no investment, a fortiori substantial investment in "state" databases, simply because the database has been financed by the taxpayers, and since no risk has been taken, no investment has thus been made. [FN69] This is not to say that state data, e.g. parliamentary proceedings, judgments, laws, etc., should not be protected if they are thereafter collected, verified or presented by a private entity and if such collection, verification or presentation results in a substantial investment.

A specific case is when a database has been financed partly by the state and partly by a private entity. This should not create insuperable difficulties. A calculation of the respective amounts invested in the venture by both should be made and a conclusion thereafter drawn as to whether there remains a substantial investment by the private entity to qualify the database for protection.

*409 "COLLECTED" DATA

In this case, a simple application of the Directive means that since the data have been collected and not simply created or invented, they qualify under the first possible object of investment, i.e. "obtaining". Obtaining equates with collecting, gathering. The data exist before the constitution of the database and are there for any-one to copy. The only remaining question is whether there is a substantial investment in this obtaining. What is a substantial investment is a separate question not analysed in detail here. [FN70] If there is a substantial investment in obtaining these data, the database right accrues. Since the collected data are reproduced, leaving the data in the public domain, there is no risk of monopolisation. Anyone who wishes to make a similar or identical database is free to do so by collecting the same data in the public domain him- or herself.

"CREATED" OR "INVENTED" DATA

In the case of created or invented data (telephone subscriber data, event data, postal numbers attributed to towns and areas, ISBN numbers, etc.), the question is whether protection can accrue if there is only a substantial investment in the creation of the data. Whether the database is protected depends on the interpretation of the word "obtaining" in Art.7 of the Directive. If "obtaining" also means, and also includes, creating, then the database is protectable. But, as has been seen, the word "obtaining" does not equate with or include the notion of creation. [FN71] Thus a substantial investment in creating data will not qualify the database for protection and the spin-off theory does not (need to) apply. Since the created data are not protectable, they are reproducible by anyone; there is no legal monopoly on them. Once the whole database is made available by its maker to the public, anyone can copy it freely. If this interpretation of the

Directive is to be followed—and the author thinks it should—it means that, intuitively, the framers had felt that granting monopolies in created data, by definition sole source data (i.e. data available only from one source), was not recommended in view of the negative consequences absolute monopolies entail.

If the opposite interpretation were nevertheless adopted, whereby obtaining would include creating, consequently if there is a substantial investment in creating data, the sui generis right would accrue. The question would therefore be whether such a result should "as a matter of principle", to use the words of a commentator [FN72] (in other words as a matter of policy), be favoured. This is where the spin-off theory enters into play. Since these data have been created for another purpose, and are the result of another activity, even if there is a substantial investment in obtaining (broadly construed) them, the theory advocates that the database should not be protected. The underlying rationale is that the investment has already been recouped thanks to the exploitation of the other activity. Consumers should not be asked to pay twice. However, another argument can be made: if the database is a spin-off database, if a fortiori there has been no investment in it, all the investment has gone into the main activity. Thus there cannot be in any case a substantial investment in creating the data alone. All the investment by definition goes into financing the main activity. It is thus submitted that the spin-off theory is not needed in this case. However, a contrary argument could be made that without the main activity the database would not exist, so that a part of the investment invested in the main activity must be apportioned to the database. In this case, the spin-off theory would apply.

In conclusion, following either of those arguments, such databases of created data either will never be protected or should not as a matter of principle enjoy the sui generis right.

"CREATED AND PRESENTED" DATA

In the case of data which are created and also presented, three situations can be distinguished. We presuppose that the restrictive meaning of "obtaining" is adopted. In the first, there is no substantial investment in the presentation [FN73] of the data and hence there is no protection by the sui generis right. The question of the application of the spin-off theory does not arise. In the second, there is a substantial investment in the presentation of the created data and hence protection is possible. In the third, it is not possible to determine whether there has been a substantial investment in the presentation as such, i.e. the presentation has been done at the same time as the creation and therefore both activities are inseparable.

The first situation does not require further discussion. In the second, two cases should be further distinguished. In the first case, the created data can be presented in many different useful ways. Hence, since many types of useful presentations are possible, competition is possible as the created data are not protectable. The case is therefore not problematic and the sui generis right should be able to accrue to those making the substantial investment in presenting the created data in various ways. In the second case, the presentation is the only one which is user-friendly, useful to the user. [FN74] Another presentation will not be commercially viable. The sui generis right, if granted, would protect the arrangement (otherwise unprotected by copyright because unoriginal) and since it cannot be rearranged in another useful way, the underlying data as well. Thus, since it is not commercially viable to rearrange the data in another way, there is a monopoly on the presentation and the underlying data.

The second case, however, creates a monopoly in the data and the question is whether the spin-off doctrine should apply. In the case of an event (concert, horse ***410** race, match, etc.), the main activity is to organise the event; the aim is not to create the data as such. The same is valid for radio and television schedules, train and plane timetables as well as for stock prices, telephone subscriber data and Michelin stars. The main activity is not to create data for their own sake but to attribute a price to a stock, a number to a person, or a star to a restaurant. In each case there is a de facto monopoly over the presentation of the created data (if it is the only presentation possible) and the data themselves. The sui generis right is an intellectual property right and is given in order to promote the development of databases. The rationale for the right is thus the incentive to invest in the making of databases. [FN75] But these databases are created despite an incentive. They would be created anyway, even if there were no protection available. However in this hypothesis, the database maker can prove a substantial investment in the presentation of the data. Should this substantial investment be rewarded in view of the fact that there is only one way of presenting the data usefully? The question is the balance that should be found between the just reward that should be given for presenting the data, a reward which is given in order to encourage this presentation, and, on the other hand, the public's interest in obtaining the data at the lowest cost possible. These two interests must be weighed before the application of the spin-off theory should be envisaged. Since there has been a substantial investment, it would be unfair to allow the public to get the presented data for free. The public has an interest in having the data presented to it in the most user-friendly way and such efforts should be rewarded. If they were not, the data would not be presented at all and the public would therefore not be able to benefit from them. However, since such data are not available elsewhere, the risk of abusing the monopoly automatically granted by the law is high. In such cases, the law (and preferably the statutory law) should provide for a compulsory or even a statutory licence in order to avoid both prohibitive prices and refusals to license. [FN76] The public should pay for the information (in other words, the database maker should be rewarded for its presentation efforts) but only a fair and reasonable price. Thus the spin-off theory should not apply since it would have the consequence that the database maker is not protected at all.

In any case, the cases where a database maker can claim a substantial investment in the presentation of the data they created themselves will be rare for three reasons. First, the created data will in many cases already be somewhat organised as a result of the main activity. Secondly, especially in the case of digitally created data, presenting the data in the most efficient way (e.g. alphabetically, as in the case of telephone subscriber data) will not result in a substantial investment. [FN77] Thirdly, in most cases, the substantial investment in presenting the data will coincide with the originality requirement in copyright law. Indeed, presentation can also be described, among others things, as the structure of the information. [FN78] Thus, if the structure is original, it is already protected by copyright and should not be protected by the sui generis right even if a substantial investment can be proven in the structure, the presentation, itself. In this case, again as a matter of policy, the same object (effort) should not be protected (rewarded) twice. [FN79] Thus the cases where the sui generis right would accrue are when there is a substantial investment which does not give rise to a copyright protected arrangement, and is more substantial than classifying data alphabetically or in a similar way. These cases, it is submitted, should be rather rare.

In the third situation, it is not possible to determine whether there has been a substantial investment in the presentation as such, i.e. the presentation has been done at the same time as the creation and therefore both activities are inseparable. In other words, it is not possible to apportion a part of the substantial investment to the activity of presentation only. In this case, a substantial investment can be proven but it is not clear which part of it can be apportioned to the presentation of the data. Since the database maker cannot prove how much of the investment (i.e. a substantial investment) went into the presentation, as a matter of proof, he or she should not be benefit from protection. The Directive answers this question clearly in its Recital 54: “Whereas the burden of proof that the criteria exist for concluding that a substantial modification of the contents of a database is to be regarded as a substantial new investment lies with the maker of the database resulting from such investment”. Arguably, a fortiori, this applies to the initial investment as well. Therefore, in those cases, the spin-off theory does not even have to apply: there is no protection simply because the substantial investment is not proven. As one commentator remarked, the fact that the data derive from a primary activity does not prevent the existence of a substantial investment as long as it is clearly identified and distinguished. [FN80] A contrario, therefore, if the substantial ***411** investment cannot be clearly apportioned, the sui generis right should not arise.

“RECORDED” DATA

The third type of data is data actually collected in nature by instruments of measure and recorded in intelligible form. In this sense, they can also be described as created since they did not exist in intelligible form before. The difference from the other category of created data is that anyone can record them since they preexist in nature. They are not data arbitrarily created by man’s brain. However, it is difficult to determine whether the data are actually created or only collected by man. Perhaps they are both collected and created. Despite this quasi-insoluble question, in many more cases it will be possible to claim that a substantial investment went into presenting these data in an intelligible form. Should the spin-off doctrine apply to those databases? The question is whether there is a primary activity distinct from a secondary activity.

In the case of meteorological, astronomical and genomic data and more generally perhaps any scientific data, is the main activity to collect and present the data? Is the research behind mapping the human genome only aimed at collecting and presenting the information? Are the efforts in discovering new planets, comets, galaxies or stars aimed only at collecting this information (the fact that they exist)? Or on the contrary, is there rather a primary activity (trying to predict weather, to understand the functioning of the universe or of man, animals or plants, to perform experiences), the data which are generated being only a mere by-product of this primary activity? [FN81] These cases are not clear-cut.

If the main activity is to present the data, the substantial investment is in collecting and presenting the data for themselves. Therefore the spin-off doctrine does not apply since there is no other activity with which the collector can recoup its investment. In addition, there is no policy argument which leans towards an application of the theory. There is no de facto monopoly possible (at least in theory) since anyone is free to collect these data. In practice, however, these kinds of data are costly to collect because the equipment needed is expensive and therefore there will be very few entities which can afford collecting the data. There is therefore a high barrier of entry and the risk of a natural monopoly is important. What then? It is submitted that protection should accrue. If the spin-off theory applied, there would be no incentive to create such important databases. The application of the spin-off theory is thus not justified and could even have the disastrous consequence that some databases would not be created at all for want of the possibility to recoup the huge investment which more than often needs to be invested in making those databases. However, as argued above, the potentiality of natural monopolies in the case of data that are extremely costly to collect is important, and abuse through either unreasonable prices or refusals to license is highly possible. The law (preferably the statutory law) should therefore provide for the possibility of a compulsory licence under certain conditions in case such abuse occurs. [FN82]

If the main activity is not to present the data but to understand the functioning of nature, be it the universe or living beings, then it can be said that the data generated are a by-product of this main activity. In this case, the spin-off theory would apply. As has been seen, the theory should not apply indiscriminately, since there can be a substantial investment in presentation. If the database has been made by a private entity, [FN83] and substantial investment in presentation can be proven, [FN84] then a correct interpretation of the Directive entails that such databases should be protected. The aim of Directive is to provide an incentive in the making of databases. If the database maker knows that he will not be protected for presenting the data, he will not invest. The dilemma, however, is the same as for “created and presented data”: should those databases however deserve protection? Perhaps in more cases than for “created and presented” data, “recorded” data will be vital to society. The temptation is great to reject the protection of those databases en bloc, in other words to apply the spin-off theory. In the author’s view, the same solution as for “created and presented” data is best. Governments do not have sufficient resources to make all scientific discoveries. This might have been the case in the past but not anymore. The aim of the Directive is to encourage the development of databases. If the state does not act and companies know that the results of their endeavours will not be protected, they will either not invest or will keep their (unpatentable) results for themselves if they can (as trade secrets). Thus, when one is confronted with the presentation of naturally occurring elements (such as the human genome) which require considerable sums, not easily available, and the data are vital to society, the enterprise making the investment should on the one hand be rewarded for its endeavours through protection but, on the other, should not prevent mankind from benefiting from it. The same balancing of interests as for “created and presented” data should be made. Both the risk of monopolising the information (through refusals to license or incredibly high prices) and the importance of its availability to humanity plead for the compromise solution of a compulsory licence, [FN85] preferably enshrined in the statutory ***412** law to enable a clear vision to all and thereby ensure legal security.

In the other cases, where the investments in collecting the data are not so great, the risk of monopoly is much lower since the data is available for anyone to record. Therefore, a normal application of the database should be recommended.

CONCLUSION

If the spin-off theory is equivalent to stating that databases of created data are not protected by the sui generis right, it is basically just interpreting the word “obtaining” in Art.7.1 of the Directive in the correct way. On the other hand, if the spin-off theory, as it seems to, refers to a broader meaning that any database which is a spin-off of another activity should not obtain protection, it goes too far. Especially in the case of “recorded” data, the application of the spin-off theory would have too far-reaching consequences which in some cases could even be disastrous. Arguably there are cases where spin-off databases should be granted protection, when a substantial investment in the presentation of the data can be proven. However, in some delimited cases (some “created and presented” data as well as some “recorded” data), the full effect of the Directive would give rise to absolute or natural monopolies. In those cases, a compromise solution would be to impose the licensing of the information at a reasonable price. In sum, we should not adopt the spin-off theory in its broader meaning. [FN86] A construction of the Directive as such is sufficient to bring a solution to the monopolistic situations created by some data identified above.

The results of this analysis can be applied to the cases decided by national courts. In most of the cases decided, e.g. in the KPN cases, in Kranten.com, in De Telegraaf v NOS, the courts should have applied the above findings. These data were either just created or created and presented. If the courts did find the data was just created, they were right not to grant protection at all. But if they had gone further in their analysis and had stated that the data were actually also presented, they should have verified whether there was a substantial investment in the presentation and continued the analysis. In general the courts' analysis was rather coarse; they applied the broader meaning of the spin-off theory indiscriminately. An exception is the BHB v William Hill case, where the court stated that the data were created but also gathered, verified and presented, and agreed that the claimant had proved a substantial investment in them. On the other hand, in NVM, the data (real estate ads) seemed collected rather than created and were also presented. The intuitive rejection of the spin-off theory and the subsequent result arrived at by the Hoge Raad are laudable, but for the wrong reasons. A simple application of the Directive (is there a substantial investment in the collection, verification or presentation of the ads?) would have allowed the court to draw conclusions rather easily. [FN87] A timid attempt to develop the argument put forward in this article can be found in the Wegener case, where the court refused to listen to the mermaids' songs of the spin-off theory and examined whether there was a substantial investment in the presentation of the data, irrespective of whether the data had been obtained or created.

The four cases before the ECJ involve either "created" data or "created and presented data". The ECJ should direct national courts in the way advocated in this article. It should be able to do so since all the arguments developed above are purely based on the Directive. If the databases are made by the state, there is no protection. This, however, does not seem to be the case. If the data are only created, then the BHB and Fixtures Marketing databases are unprotected. If the data are both created and presented, first the database makers should prove there has been a substantial investment in the presentation of the data. If it is proven, then it should be seen whether this presentation is the only user-friendly, commercially viable, way to present the data. If it is, then protection should accrue but should be regulated by means of a compulsory or a statutory licence. If it is not, the normal effect of the Directive should be given.

And to answer the rhetorical questions posed by one commentator [FN88]: parliaments should not have a database right in the results of their daily voting because the collection of those results is a state database. Football clubs should not have a database right in their football scores if they are purely created data. If they are created and presented data which are only presentable in one user-friendly way (which will be the most frequent case) and there is a substantial investment in this presentation (which on the other hand will be rare), protection should arise but be licensed by law at a reasonable price. Cricket players and stock markets should be treated in the same way. Finally, an astronomer should have a sui generis right in the co-ordinates of newly discovered stars, planets or galaxies. However, he should not refuse to license the data or demand an astronomic price for them.

POST-SCRIPT

On June 8, 2004 the Advocate General ("A.G.") gave its Opinions in the four references for preliminary rulings. Due to the editing schedule of this article, it has not been possible to take them into account in the body of the text. In summary, the A.G. holds that the provisions of Directive are the decisive factor in its interpretation and that reliance on the spin-off theory should not result in the exclusion of every spin-off database. Later she rejects the spin-off theory in the sense that protection is also possible where the obtaining was initially for the purpose of an activity other than the creation of a database. The A.G. agrees that databases of purely created data are not protected by the sui generis right. Obtaining is to be interpreted narrowly (in the sense of ***413** collecting, gathering, thus excluding generating data). It presupposes the pre-existence of the data. However the A.G. also points out that in many instances of a database maker both creating and collecting data, it will be difficult to make a distinction between those two activities. When the creation and processing of the data are inseparable, the protection of the Directive accrues because this activity falls within the term "obtaining". At the time of this post-script, the judgments of the ECJ are still awaited.

END NOTES

FN. The author welcomes comments and can be reached at e.derclaye@qmul.ac.uk.

FN1. Directive 96/9 of the Council and the Parliament on the legal protection of databases of March 11, 1996 [1996] O.J. L77/20.

FN2. See the website maintained by the IVIR, www.ivir.nl/files/database/index.html.

FN3. See E. Derclaye, "Databases sui generis right: what is a substantial investment? A tentative definition" [2004] I.I.C. [forthcoming].

FN4. D. Visser, comment on the decision of the Dutch Supreme Court, March 22, 2002 (NVM v De Telegraaf) [2002] A.M.I. 102.

FN5. See British Horseracing Board ("BHB") v William Hill [2001] R.P.C. 612 and the two Fixtures Marketing cases discussed below, see nn.41 and 42.

FN6. P. B. Hugenholtz, "Program Schedules, Event Data and Telephone Subscriber Listings under the Database Directive—The 'Spin-Off' Doctrine in the Netherlands and elsewhere in Europe", paper presented at 11th Annual Conference on International Intellectual Property Law and Policy, Fordham University School of Law, New York, April 14-25, 2003; P. Raue and V. Bensinger, "Implementation of the sui generis right in databases pursuant to s. 87 et seq. of the German Copyright Act" (1998) 3/6 Comms. Law 222, citing P. Katzenberger [1997] AfP 434, give yet another example: "a publishing house which uses its published periodicals at the end of the year to publish a CD-ROM database, cannot state that costs accrued for the production of the periodicals were also investment for the production of the database".

FN7. Hugenholtz, n.6 above.

FN8. See nn.41 and 42 below.

FN9. Hugenholtz, n.6 above.

FN10. D. Visser, "The database right and the spin-off theory" in E-commerce law (H. Snijders and S. Weatherill ed., 2003), pp.105-110, at p.106; Hugenholtz, n.6 above, at p.2.

FN11. Visser, n.10 above, at p.106; Hugenholtz, n.6 above, at p.2.

FN12. Memorandum in reply to Parliamentary report of December 22, 1998, Second Chamber of Parliament, TK 26108 no.6, p.5.

FN13. Court of Appeal of Arnhem, April 15, 1997 (1997) 5 Mediaforum B 72; [1997] Informatierecht/AMI 218; [1997] Computerrecht 314, comment H. Struik (Denda v KPN/PTT Telecom).

FN14.. Hugenholtz, n.6 above, at p.3; A. Beunen, "Kanttekening bij KPN / XSO" (2000) 4 Informatierecht/AMI 58 at p.59.

FN15. Court of First Instance of Almelo, December 6, 2000 [2001] AMI 69 (KPN v Denda International).

FN16. Pres. Court of First Instance of The Hague, January 14, 2000 (2000) 2 Mediaforum 64, comment Hugenholtz; (2000) 4 Informatierecht/AMI 71, and comment Beunen, n.14 above.

FN17. S. Gijrath and B. Gorissen, "Applying the database act to on line information services, a trial and error exercise" [2000-01] C.W. 26.

FN18. NMa/OPTA, December 14, 1998 (KPN v Denda) cited by W. Grosheide, "Database protection—the European way" (2002) 8 Wash. U. J.L. & Pol'y 39-74 at p.65. It is interesting to note that in two major cases, one German, one French, also involving telephone directories, allusion to the spin-off doctrine was not made (see Tele-Info CD, Bundesgerichsthof, May 6, 1999, I ZR 199/96, p.16 et seq. and France Telecom v MA Editions, Com. Court of Paris, June 18, 1999 (1999) 4 DIT 57; D. [2000] Jurisp.105 and comment D. Goldstein; [1999] Expertises 398, comment A. BrÃ¼ning).

FN19. NOS is short for Nederlandse Omroep Stichting. A number of broadcasters were also involved as respondents in the case.

FN20. Dutch competition authority ("NMa"), September 10, 1998 (1998) 10 Mediaforum 304; (1999) 1 AMI 12 (De Telegraaf v NOS/HMG). The Dutch competition authority held that the only cost in the making of the database consisted of the keying in of the data in a computer and doubted whether this constituted a substantial investment. See also Grosheide, n.18 above, pp.64-65.

FN21. The Dutch competition authority upheld its decision on October 3, 2001; see www.nmanet.nl/nl/

FN22. See judgment at para.[6]. Court of Appeal of The Hague, January 30, 2001 (De Telegraaf v NOS), [2001] Mediaforum 94, comment T. Overdijk; [2001] AMI 73, comment H. Cohen Jehoram. This case was an appeal from a summary judgment of January 5, 1999 by the President of the Court of First Instance of The Hague. The Supreme Court held subsequently that the refusal by NOS to communicate its broadcasting schedules was an abuse of dominant position under the Dutch Competition Act.

FN23. Pres. Court of First Instance of Rotterdam, August 22, 2000 [2000] Computerrecht n.5; [2000] Mediaforum 344; [2000] AMI 205, comment Koelman (National Newspapers v Eureka Internetdiensten V.O.F. and others); English translation at www.ivir.nl/rechtspraak/kranten.com-english.html.

FN24. T. Overdijk [2000] Mediaforum 347, believes that headlines or articles titles are a good example of by-product.

FN25. See also Gijrath and Gorissen, n.17 above, at p.27.

FN26. President of the Court of First Instance of The Hague, September 12, 2000, available on www.rechtspraak.nl/uitspraak/frameset.asp?ui_id=22305.

FN27. Court of Appeal The Hague, December 21, 2000 [2001] Mediaforum 87, comment M. van Eechoud. Also available on www.ivir.nl/rechtspraak/telegraafnvmII.html.

FN28. Supreme Court, March 22, 2002, available on www.rechtspraak.nl/uitspraak/frameset.asp?ui_id=32352. Comments by J. Krikke [2002] E.I.P.R. N148-149; C. Gielen [2002] E.I.P.R. N131-132; H. Speyart, Intellectuele eigendom & reclamerecht (2002), p.153; Visser, n.4 above.

FN29. Judgment at 3.4.1.

FN30. D. Visser, n.4 above, at p.102. This is why in the opinion of this author (as well as the Advocate General and the Supreme Court themselves) it was not necessary to ask a preliminary ruling to the ECJ. For this author, a "real" spin-off situation would be results of a sporting competition (list of the ranking and the timing of the sportsmen).

FN31. Judgment at 3.4.1.

FN32. Krikke; Gielen, n.28 above.

FN33. Visser, n.10 above, at p.109; Hugenholtz n.6 above, at p.3; Speyart, n.28 above.

FN34. President of the Court of First Instance of Groningen, July 18, 2002, available on www.rechtspraak.nl/uitspraak/frameset.asp?ui_id=36590; Court of Appeal of Leeuwarden, November 27, 2002, available on www.rechtspraak.nl/uitspraak/frameset.asp?ui_id=41627.

FN35. Court of First Instance of Paris, June 22, 1999 (1999) 686 PIBD III-494 (Groupe Miller Freeman v Tigest); Court of Appeals of Paris, September 12, 2001 (2001) 187 Legipresse 215-225; (2001) 35 D. 2895; (2002) 1 JCP 25-31, comment Pollaud-Dullian; (2002) 740 PIBD III-198-201 (Tigest v Reed Expositions France et Salons FranÃ§ais et Internationaux SAFI), confirming the judgment in full.

FN36. L. Tellier-Loniewski (December 2001) 187 Legipresse 222-225; F. Pollaud-Dulian (January 2002) 1 JCP 27 et seq.

FN37. CA Paris, March 20, 2002 (2002) 746 PIBD III-331-334 (Construct Data Verlag v Reed Expositions France). Groupe Miller Freeman had become Reed Expositions France in the meantime.

FN38. N. Mallet-Poujol, "Protection des bases de donnÃ©es" (2003) 8 Ed. Juris- classeur, Fasc. 6080, p.13.

FN39. ibid.

FN40. The Court of First Instance of Athens also asked questions to the ECJ as regards the interpretation of Art.7 of the Directive, the first and second being only implicitly targeted at determining whether the spin-off theory applies. The first question asks what is the concept of database and the scope of Directive 96/9 and in particular of Art.7. The second asks whether the lists of football fixtures enjoy protection as databases over which there is a sui generis right in favour of the maker and with what consequences (Reference for a preliminary ruling by the Monomeles Protodikio Athinon by order of that Court of July 11, 2002 in the case of Fixtures Marketing Ltd v Organismos Prognostikon Agonon Podosphairou AE, Case C-444/02 [2003] O.J. C031/12).

FN41. Reference for a preliminary ruling by the HÃ¶gsta Domstolen by order of that court of September 10, 2002 in the case of Fixtures Marketing Ltd v AB Svenska Spel, Case C-338/02 [2002] O.J. C274/23-24.

FN42. Court of First Instance of Vantaa, February 1, 2002, Case 99/4899, unofficial English translation at www.ivir.nl/files/database/vantaanKO.010202.ECJpÃ¤Ã¤tÃ¶s.kÃ¤Ã¤nnÃ¶s.doc; reference for a preliminary ruling by the Vantaan KÃ¤rÃ¤jÃ¤oikeus by order of that court of February 1, 2002 in the case of Fixtures Marketing Ltd v Oy Veikkaus Ab, Case C-46/02 [2002] O.J. C109/27-28.

FN43. See www.patent.gov.uk/about/ippd/ecj/2002/c4602.htm.

FN44. See n.5 above.

FN45. Paras [33] and [34] of the judgment: "as one would expect, effort put into creating the actual data which is subsequently collected together in the database is irrelevant.... For this reason, the costs and effort involved in BHB fixing the date of a racing fixture does not count towards the relevant investment to which database right is directed."

FN46. In para.[8], the judge holds that the BHB database needs considerable checking of data which are obtained from a number of sources. It cost Â£4 million per annum to obtain the data, verify and present them. In addition, the maintenance of the database involved 80 employees and extensive computer hardware and software (para.[6] of the judgment).

FN47. Para.[34] of the judgment.

FN48. Reference for a preliminary ruling by the Court of Appeal (England and Wales) (Civil Division), by order of that court dated of May 24, 002 in the case of (1) the British Horseracing Board Ltd (2) The Jockey Club and (3) Weatherbys Group Ltd v William Hill Ltd, Case C-203/02 [2002] O.J. C 180/14.

FN49. See Hugenholtz n.6 above, at p.4. Pro: Struik n.13 above, Overdijk n.22 above, Van Eechoud, n.27 above, Visser n.10, above. See also Raue and Bensinger, n.6 above, p.222, citing Katzenberger [1997] AfP 434. Contra: Speyart, n.28 above. Hugenholtz, n.6 above, notes that H. Cohen Jehoram's position (n.22 above) is unclear while Visser, n.4 above, at p.102, believes that Cohen Jehoram is of the opinion that the spin-off argument finds no basis in any provision of the Directive.

FN50. The Dutch Government has restated its support for the doctrine; see its submission to the ECJ in the Fixtures v Veikkaus case: written comments by the Government of the Netherlands, June 26, 2002, submitted according to Art.20(2) of the Protocol regarding the Statute of the Court of Justice of the EC, Case C-46/02 (Fixtures Marketing Ltd v Oy Veikkaus Ab).

FN51. P. B. Hugenholtz, "The database right: lessons from Europe", TIPLO meeting, Middle Temple, London, April 25, 2002, on file with the author.

FN52. The following arguments for and against the spin-off theory are based on Hugenholtz, n.6 above, at p.5 et seq. See also G. Westkamp, "Protecting databases under US and European law—methodical approaches to the protection of investments between unfair competition and intellectual property concepts" (2003) 34 I.I.C.772 at p.784.

FN53. Recitals 10-12. See also Koelman, n.23 above.

FN54. Hugenholtz n.6 above, at p.5, citing T. Overdijk [2002] Mediaforum 185.

FN55. H. Speyart, n.28 above at p.154.

FN56. Hugenholtz n.6 above, citing Speyart, n.28 above.

FN57. H. Struik, n.13 above, at p.323 also agrees with this interpretation; see also Urheberrecht Kommentar (2nd ed., G.Schricker ed.,1999), p.1336.

FN58. Hugenholtz n.6 above, at p.5.

FN59. Hugenholtz n.6 above, at p.5. This Recital provides: "Whereas, as a rule, the compilation of several recordings of musical performances on a CD does not come within the scope of this Directive, both because, as a compilation, it does not meet the conditions for copyright protection and because it does not represent a substantial enough investment to be eligible under the sui generis right". In the author's view this does not mean clearly that an investment in created data can never qualify. It is only a matter of substantiality. A contrario the Recital would seem to mean that created data which are the result of a investment which is substantial enough could be protected.

FN60. See BHB v William Hill (n.5 above), NVM v De Telegraaf (n.28 above), Fixtures Marketing v Svenska Spel (n.41 above) and Construct Data Verlag v Reed Expositions France (n.37 above).

FN61. "Costs incurred by generating information are analogously to be considered as 'obtaining'." See G. Westkamp, "EU Database protection for information uses under an intellectual property scheme: has the time arrived for a flexible assessment of the European database Directive?", paper presented at the 11th Annual Conference on International Intellectual Property Law and Policy, Fordham University School of Law, New York, April 14-25, 2003, pp.10- 11; Westkamp, n.52 above, p.784, citing J. Gaster, "The New EU Directive Concerning The Legal Protection Of Databases" (1997) 20 Fordham International Law Journal 1129 at p.1132.

FN62. Hugenholtz n.6 above, at p.5.

FN63. European Court of Justice, Cases C-241/91 P & C-242/91 P Radio Telefis Eireann (RTE) & Independent Television Publications Ltd (ITP) v Commission [1995] E.C.R. I-743; [1995] 4 C.M.L.R. 718; [1995] 1 C.E.C. 400.

FN64. Mirrored by the American case Feist Publications v Rural Telephone Service Co 499 U.S. 340; 111 S. Ct 1282 (1991).

FN65. See, for the same idea, Speyart, n.28 above.

FN66. Westkamp, n.52 above, at p.785.

FN67. Hereafter the broad interpretation will be the one discussed unless otherwise stated.

FN68. Westkamp, n.52 above, seems against the broad application of the spin-off doctrine because it does not take into account the substantial investment in verifying the information, i.e. it applies irrespective of those investments. He criticises the spin-off doctrine in the sense that there might be investment in presenting the data even if the data are not collected but generated. While the author agrees with this argument, it will be further elaborated under the several types of data and a solution will be proposed to the different problems created by the several types of data in question.

FN69. State databases have been expressly excluded from protection in the several Bills which have been presented to the US Congress in the past (1996 and 1999) including the most recent one, H.R. 3261 introduced in October 2003 and available on http://thomas.loc.gov/ (see s.5(a) of the Bill).

FN70. See Derclaye, n.3 above.

FN71. See the arguments made Hugenholtz, n.6 above. According to an etymological dictionary (www.etymonline.com), the word "obtain" comes from the Latin "obtinere" which means "hold, take hold of, acquire" from ob "to" + tenere "to hold".

FN72. Hugenholtz, n.6 above.

FN73. By definition since the data are created, their accuracy is not at stake/an issue.

FN74. A not dissimilar situation occurred in the IMS Health case, a decision of the E.C.J. of April 29, 2004, as yet unpublished, available on www.curia.eu.int). In that case, however, the court held there was copyright in the structure. The sui generis right was not at stake. Another difference is that data were not created but were freely available (no property rights were claimed on the postal codes and they could thus be used both by the claimant and defendant).

FN75. See one of the arguments for the application of the spin-off theory above.

FN76. The difference between the two is that under a compulsory licence, whereas the user has no right to make use of the work without the prior authorisation of the rightowner, there is an obligation of the rightowner to contract with the user (a duty to grant a licence to those users who request one) and the price is determined through negotiations (if they do not succeed, the courts or an administrative authority steps in). Under a statutory licence, the user is free to use the work without authorisation provided he pays a price (generally predetermined by law). See L. Guibault, Copyright limitations and contracts: An analysis of the contractual overridability of limitations on copyright (2002), p.25. In this case, a statutory licence seems more appropriate because the database owners are absolute monopolists. On the other hand, it could be argued that the information is not so vital to society that such a radical solution should not be advocated and that the less radical solution of a compulsory licence should be preferred. At present, the directive only provides that antitrust rules apply to database makers.

FN77. Com. Court of Paris, February 16, 2001, cited by Caron, Communication Commerce Electronique, July-August 2002, pp.20-22 (AMC Promotion v CD Publishers Construct Data Verlag GmbH). In this case, the effort in presenting data in alphabetical order was not considered a substantial investment.

FN78. P. Gaudrat, "Loi de transposition de la directive 96/9 du 11 mars 1996 sur les bases de donnÃ©es: le champ de la protection par le droit sui generis" (1999) 52 /1 RTD Com. 97.

FN79. See for an application: Electronic Techniques (Anglia) Ltd v Critchley Components Ltd [1997] F.S.R. 401. The same judge who in BHB v William Hill (n.5 above) granted protection to BHB's database in the past also ruled that the same creative effort should not give rise to two copyrights.

FN80. See Mallet-Poujol, n.39 above.

FN81. J. Bovenberg, "Should genomics companies set up databases in Europe? The EU Database Protection Directive Revis-ited" [2001] E.I.P.R. 364, thinks that genomic databases cannot be by-products of another objective.

FN82. In this case, it seems that a compulsory licence is more appropriate than the statutory licence which could be advocated in the case of “created and presented” data because the risk of monopoly is less high (natural monopolists rather than absolute monopolists). On the other hand, it could be argued that since the information is so vital to society a statutory licence should be preferred. The issue of the determination of the conditions at which the licence would exist would deserve a whole article and are not discussed here.

FN83. In the case of the genome, this was partially the case (Celera (www.celera.com) sequenced part of it).

FN84. See the argument developed above for “created and presented data”.

FN85. See the argument developed n.82 above, which could apply here as well.

FN86. Except for created data, if the restrictive meaning of “obtaining” is not adopted.

FN87. In the opinion of Visser, n.4 above, the database was probably protected.

FN88. Hugenholtz, n.51 above.

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PROTECTION OF INNOVATIVE MEDICINAL PRODUCTS AND REGISTRATION OF GENERIC PRODUCTS IN THE EUROPEAN UNION: IS THE BORDERLINE SHIFTING? STATE OF PLAY AND THE PROPOSED EUROPEAN MEDICINE LEGISLATION

Manuel Campolini.

Legislation: Proposal for a European Parliament and Council Directive amending Directive 2001/83 on the Community code relating to medicinal products for human use COM(2001) 404 final

European Parliament and Council Directive 2001/83 on the Community code relating to medicinal products for human use

Subject: INTELLECTUAL PROPERTY. Other related subjects: Health

Keywords: Authorisation; EC law; Medicines

Abstract: Discusses the implications of the proposal on the marketing authorisation of medicines. Refers to the protection of regulatory data, including clinical trials, under Directive 2001/83. Reviews the case law on the criteria for deciding that a generic medicine is essentially similar to a proprietary medicine which was marketed and authorised, so that abridged approval can be obtained after the term of protection expires. Considers the new criteria, under the proposal, for a generic of a reference product. Comments on the amendments suggested by the European Parliament. Welcomes the proposal to introduce a harmonised term of protection of 10 years.

***91** The European Commission has within the last year or so issued a proposal [FN1] revising European pharmaceutical legislation. The European Parliament and the Council are examining this draft legislation. It aims to improve the European registration process.

Among other things, this draft legislation proposes changes on issues that are likely to impact on product development decisions as well as on the opportunities for generic products to come on the market. In this context, one of the focal points of opposition between the innovative and the generic industries concerns the protection given to the registration dossier. The draft legislation also proposes the substitution of the concept of "essentially similar products" with "generic products" and the introduction of a concept of "reference product".

The discussion that follows is aimed at identifying the extent to which the borderline that separates new original products or line extensions and generic copy has been shifted, and some of the potential consequences.

The Issues and the Current Situation

Regulatory data protection—definition, importance and problems

The simple discovery of a new molecule is a far cry from ensuring that a new medicine can be delivered to patients. This new molecule needs to be developed. Long, complex and costly studies, test data and clinical trials have to be successfully carried out in order to demonstrate the safety and efficacy of the new medicine before a marketing authorisation can be obtained from registration authorities. Regulatory data protection—sometimes improperly referred to as **data exclusivity** —is the protection granted to the above-mentioned studies, test data and clinical trials against generic copiers.

Regulatory data protection is encapsulated in Art.10.1.a.iii of Directive 2001/83. [FN2] In practice, regulatory data protection means that during a period of time (usually ten or six years), starting from the first marketing approval in the EU, the authorities cannot assess (and therefore cannot approve) a supposedly similar pharmaceutical submitted by a generic company if the latter does not supply all the studies, test data and clinical trials that demonstrate the safety and efficacy of the copy product. This means that the generic company would have to repeat the whole testing process. However, in practice generic companies duplicate such studies under exceptional circumstances only. [FN3] In the vast majority of cases they simply wait for the expiry of the data protection period, not for ethical reasons but simply to reduce the cost of copying. Indeed, after the protection period the generic company can obtain a regulatory approval based on an abridged application without submitting the evidence of extensive clinical trials but mainly by demonstrating that the copy product is "essentially similar" to the original one.

One should note that while the term of protection for the originator starts when the regulatory authorities have approved the medicine, effective marketing can commence in most of the EU Member States only when pricing and reimbursement procedures have been completed. When the mutual recognition procedure ("MRP") is used, the delay can also increase significantly. As a consequence, effective marketing sometimes takes place years after the first approval (up to four years in some cases). The effectiveness of the tenor six-year period of protection is consequently curtailed.

The question is whether regulatory data protection is needed in an area where products are generally protected by a patent and SPC. In normal circumstances, where patent/SPC protection is effective, data protection does not play a role in protecting an innovative product from copy. Indeed, patents combined with SPC will provide up to 15 years of protection from the first marketing authorisation in the Community whereas with data protection this period is limited to a maximum of 10 years.

For the innovative industry, regulatory data protection is nonetheless needed in a limited but important number of cases. These cases relate to circumstances where the effective length of patent/SCP protection is reduced owing to an exceptionally long development time or where the pharmaceutical does not benefit from patent protection, or where the patent has been declared invalid. In the above circumstances, the certainty that the generic player will not be able to use the originator's data and clinical trials during the protection period plays a crucial role as a safety net. This safety net is of paramount importance when making the business decision to make the investment to develop pharmaceutical products for which patent protection is weak.

While a medicinal product may not benefit from patent protection it does not necessarily follow that such a product does not constitute an innovation, or is not ***92** useful for patient, or does not require important R & D expenditure. It simply demonstrates that the patent system does not necessarily cover all the innovation. It also demonstrates that some products, not necessarily innovative in the "patent sense" but deriving from incremental research, might be important for public health and patients. To deprive these different types of products of any protection and therefore from an incentive for their development would simply deprive society of valuable medicine to improve health. Beyond pure commercial implications, regulatory data protection has a strong ethical dimension.

The current legislation poses a number of problems and it is possible to identify two main issues. The first one is the absence of complete harmonisation of the term of protection. The second one is the absence of the protection of new indications developed by the originator after the first marketing approval.

Even if a 10-year period of protection is applicable in the majority of the cases, situations where a six years' protection is applicable create an unwelcome discrepancy in the EU internal market. In addition, the Member States who have six years' data protection for nationally approved products are also "at liberty not to apply [this] six-year period beyond the expiry of a patent protecting the original product". This may have the absurd result that if there is no patent protection available, there is no regulatory data protection. It is precisely when patent protection is weak that data protection is the crucial incentive. One should notice that no Member State currently uses this option of "patent linkage" to curtail data protection. However, this legislation has been used as a model by some Eastern European countries such as Hungary, which has introduced "patent linkage" in its legislation. The compatibility of this option with TRIPs Art.39.3 is certainly debatable.

Secondly, the European Court of Justice decided in the landmark Generics case of 1998 [FN4] that data relating to a new indication, a new dosage form, a new dose, a new dosage schedule does not benefit from protection of its own. Such kinds of developments submitted after the first marketing will benefit only from the remaining term of the six- or ten-year period of protection. As a result, the more complex, difficult and lengthy the development of a new indication (or a new development), the less protection it will benefit from. The court realised the non-equitable nature of this situation and suggested a modification in the legislation. This is, of course, particularly true for many new indications that cannot benefit from usage patent.

ESSENTIAL SIMILARITY

After the data protection period, Directive 65/65 requires that the generic product should be "essentially similar" to the original one in order to benefit from an approval based on an abridged application. There is no identity requirement. In the Generics case, the ECJ indicated that a copy product is considered as essentially similar to “an original medicinal product” where it satisfies the following criteria:

1. it has the same qualitative and quantitative composition in term of active principles;

2. It has the same pharmaceutical form; and

3. It is bio-equivalent;

unless it is apparent that it differs significantly from the original product as regards to safety/efficacy.

The ECJ does not define the concept of active principles. Should it be limited to the active moiety or should it also cover the specific salts, esters and derivatives used by the innovator? This is important as the advantages of new salts and esters may well become apparent only after a number of years. Salts and esters may have an influence on the safety and efficacy profile of the medicine. They may also be discovered and patented years after the active moiety.

The concept of pharmaceutical form is not expressly defined and is therefore controversial. An example can be found in the recent Novartis case in the United Kingdom that has been referred to the ECJ. [FN5] This case relates to Sandimmun, an immuno-suppressant containing the active ingredient cyclosporin with a macro-emulsion system formulation developed by Sandoz (now Novartis). It was approved in 1983. Sandoz improved its product and variability in drug blood levels was reduced and bioavailability increased. The improved product, which is a micro-emulsion system formulation, was submitted for approval with a new trade name (Neoral) on the basis of a hybrid application. Some data and trials developed for Sandimmun were referred to, but the regulatory authorities also required substantial new data and phase III clinical trials. Neoral was approved in 1995. It is not bio-equivalent to Sandimmun and it also has a new indication.

A generic company submitted an abridged application for a cyclosporin product called SangCya, which was not a macro-emulsion or a micro-emulsion but a suspension or nano-dispersion system. The UK Medicine Control Agency (“MCA”) approved SangCya on the basis of an abridged application; not only by referring to Sandimmun but also by cross-referring to Neoral, arguing that the pharmaceutical form was the same.

MCA considers that “oral solution” is the pharmaceutical form and referred to the British Pharmacopeia. However, the standard terms drawn up by the Council of Europe under the auspices of the European Pharmacopeia considers that it “is the combination of the form in which a pharmaceutical product is presented by manufacturer (form of presentation) and the form in which it is administered including the physical form (form of administration)”. The Advocate General in the Generics case also referred to the European Pharmacopeia. [FN6]

Last but not least, the necessity that the copy product should always be bio-equivalent to the original one was in fact questioned by the MCA. Sandimmun and SangCya are not bioequivalent; neither are Neoral and Sandimmun bio-equivalent. The MCA nonetheless approved SangCya. However, the reading of the Generics decision could support the argument that if the same active ***93** ingredient is further developed and the new version is no longer bio-equivalent to the old version, both products are not essentially similar. As a consequence of this reading, the generic producer must always wait 10 years after the first marketing authorisation of each specific version of the product before being authorised to submit an abridged application for its generic version bio-equivalent to the product in question. The MCA also allowed SangCya to benefit from the new indication covered by Neoral despite the absence of bio-equivalence.

The English court referred the case to the ECJ with the following questions:

1. In considering a marketing authorization for a new product C under Article 4.8(a)(iii) of Directive 65/65, referencing a product A authorized more than 6/10 years ago, is a national competent authority ever entitled to cross-refer, without consent, to data submitted in support of a product B which was authorized within the last 6/10 years?

2. If so, may such cross-reference be made in circumstances where

(a) Product B was authorized under the Article 4.8(a) hybrid abridged procedure, referencing product A; and

(b) The data to which reference is made consists of clinical trials which the national competent authority indicated would be necessary if the marketing authorization was to be granted and which were submitted in order to demonstrate that product B, though suprabioavailable to product A when administered in the same dose, is safe?

3. (a) Does the final subparagraph of Article 4.8(a) of Directive 65/65 (‘the proviso’) apply only to applications made under Article 4.8(a)(iii) or to application made under Article 4.8(a)(i) also?

(b) Is essential similarity a prerequisite for the use of the proviso?

4. Can products ever be essentially similar for the purposes of Article 4.8(a)(i) and (iii) of Directive 65/65 when they are not bioequivalent, and if so in what circumstances?

5. What is the meaning of pharmaceutical form, as used by the Court in its Judgment in Case C-368/96 Generics? In particular, do two products have the same pharmaceutical form when they are administered to the patient in the form of a solution diluted to a macro-emulsion, micro-emulsion and nano-dispersion respectively?

6. Is it consistent with the general principle of non-discrimination for a national competent authority, faced with hybrid application for marketing authorizations under Article 4.8(a) of Directive 65/65 referencing product A for two products neither of which is bioequivalent to product A:

(i) to indicate that it is necessary for a marketing authorization to be granted for product B to be supported by full clinical data of the type required by Part 4(F) of the Annex to Directive 75/318/EEC; but

(ii) having considered the data filed in support of product B, to grant a marketing authorization for product C if that application is supported by trials not meeting the requirements of Part 4(F) of the Annex to Directive 75/318/EEC?"

A similar case took place in the Netherlands, involving Novartis and another generic company whose product was allegedly essentially similar to Sandimmun but not to Neoral. Reference to Neoral was therefore not allowed in order to obtain a generic marketing authorisation based on an abridged application. [FN7] It is noticeable that the Dutch Court took this decision in full awareness of the pending ECJ case.

MARKETED AND AUTHORIZED

Art.4.8.a.iii of Directive 65/65 indicates that a generic abridged approval can be obtained if " ... the medicinal product is essentially similar to a product which has been authorized within the Community, in accordance with the Community provisions in force, for not less than six [or ten] years and is marketed in the Member State for which the application is made ... ." It is clear that the innovator's product should have been approved for at least ten (or six) years. In addition, the text states that the granting to a generic copier of an approval in a specific Member State is possible only if when the abridged application is submitted, the original product is still marketed in the country concerned.

There is currently a pending case that has been referred by a Danish court to the ECJ regarding the interpretation of the words "marketed" and "authorised". This case (AstraZeneca Losec v MUPS) [FN8] involves a product registered in Denmark via the national procedure. The innovator has registered and marketed an improved version of its original product. As a consequence, it has withdrawn the marketing authorisation for its older product. This happened after the six-year data protection period applicable in Denmark for national registration had elapsed.

The above wording is challenged and the generic company argues that the term "marketed" substantially means that the original product should have been authorised in the country for which the application is made. However, the main dispute relates to the scope of "authorised" as the withdrawal took place after the submission of an abridged application by a generic company but before its approval by the regulatory authorities.

The Danish court has referred the following questions to the ECJ:

"**1.** In a case where a company applies for marketing authorization based on an abridged application (simplified procedure) pursuant to Article 4.8(a)(iii) of the First Medicinal Products Directive (Council Directive 65/65/EEC as amended from time to time), stating that the product applied is essentially similar to a reference product that has been approved in the Community for the period of time required by the Directive, is it then necessary and sufficient that the reference product

(a) had been marketed in the member state relevant to the application on the date of application, or

(b) is still being marketed in the member sate relevant to the application on the date of application, or

(c) Is still marketed both on the date of application and on the date of issuance of the marketing authorization in the member state relevant to the application?

2. Does the term "marketed" in Article 4.8(a)(iii) imply that it is sufficient and necessary that there is an approval in the form of a marketing authorization for the reference ***94** product in the Member State relevant to the application?

3. If questions 1.b or 1.c are answered in the affirmative, does the First Medicinal Products Directive then provide a legal basis for allowing the national authorities to derogate from the relevant requirements so that an abridged application can, after all, be treated on its merits?"

THE COMMISSION'S INTERPRETATION OF THE CURRENT TEXT

The Commission provides its own interpretation of the legislation in its Notice to Applicant (NTA) which is regularly updated. [FN9] This document is not legally binding but is supposed to give guidance, taking into account the various developments at the ECJ level.

ESSENTIAL SIMILARITY

The Commission assimilates "active principle" and "active substance". It indicates that

"active substance(s) in the form of different salts, esters, derivatives, etc. but with the same active therapeutic moiety should (normally) not be considered as a new active substance, unless they differ significantly from each other in properties regarding safety or efficacy. Evidence on same properties regarding safety and efficacy of a different salt, ester, other derivative of an active substance should be provided by the applicant when he claims that the medicinal product for which the application is submitted is essentially similar to an authorized medicinal product containing another salt ester or other derivative of the same active substance. [FN10]"

The Commission suggests that the generic company that uses different salts or esters should systematically provide bridging data to demonstrate the absence of difference in safety and efficacy.

The Commission does not propose a definition of pharmaceutical form but states that this term "must be understood broadly". [FN11] It also indicates that the generic product must be essentially similar to an original product or to a reference product. This notion of a reference product is a creation of the Commission and does not exist in the legislation or in the ECJ decision. The NTA states that "This reference medicinal product might be of ... another pharmaceutical form ... than the original medicinal product". [FN12] This interpretation might be seen as a deviation of the Generics judgment as it de facto could imply that two products with the same active ingredient but with different pharmaceutical forms [FN13] are deemed to be essentially similar. One could imagine the same active ingredient being developed later on by another company with a different pharmaceutical form and for a different therapeutic indication. The products of the two companies would be considered as essentially similar and the second entrant would only benefit from the remaining data protection—if any—granted to the first entrant. The criteria of the Generics decision appear here to be largely twisted, even if not completely, as the NTA does not suggest that there could be difference in bio-equivalence between the original and the so-called reference product.

MARKETED AND AUTHORISED

The NTA states that

"competent authorities must check that a product, to which reference is made, is still authorized at the time of application. If the original/reference ... authorization is withdrawn after a generic/informed consent application has been lodged but before the authorization has been granted, competent authorities may nevertheless grant the generic marketing authorization if there are no public health concerns which lead to the withdrawal/suspension of the original product." [FN14]

"Marketed must be understood as 'authorized' as the medicinal product has been authorized under a 'marketing authorization'. If a marketing authorization still exists and the competent authority is informed that the medicinal product is not on the market, the competent authority should consider the reasons carefully. Confirmation that the medicinal product is authorized in the Member States involved in the procedure should be provided in the application for the marketing authorization" [FN15]

The Commission's position seems to be that the original product still has to be authorised at the time the generic application is filed even if it is effectively no longer marketed. It is suggested, albeit implicitly, that the absence of marketing plays a role only if safety concern is the reason for the absence of marketing (or of the withdrawing of the original authorisation after the generic application has been lodged).

The Commission's Proposal for New Legislation [FN16]

REGULATORY DATA PROTECTION (ART.10.1)

The Commission proposes complete harmonisation of the initial regulatory data protection period to 10 years. In addition, this initial period could be extended to 11 years "if during the first eight years of the above-mentioned ten years the [innovator] obtains an authorization for one or more new therapeutic indications which, during the scientific evaluation prior to their authorization, are held to bring a significant clinical benefit in comparizon with existing therapies".

The threshold to meet in order to obtain this additional protection is apparently very high. The term of the protection applicable to new indications is limited to one additional year. This additional year of protection applies to the whole dossier and is not limited to the ***95** new indication. This has the advantage of administrative simplicity.

BOLAR (ART.10.4)

An important concession is proposed in favour of generic producers: the introduction of a Bolar-type exemption in the European legislation. Generic copiers would be authorised to work with the patented substance in the EU before the patent/SPC expiry in order to perform the necessary studies to obtain an approval based on an abridged application. A WTO panel has accepted the conformity with TRIPs of certain Bolar-type provisions. [FN17] However, the TRIPs compliance of the draft legislation remains to be proved, as the proposed Bolar derogation would apply to pharmaceutical products only, and not to all types of product contrary to the Canadian legislation. There is an unsettled discrimination aspect, which is probably contrary to TRIPs. A Bolar-type derogation applicable only to the SPC—which is beyond TRIPs—would more easily avoid this type of legal criticism without making a huge practical difference as such studies are likely to be conducted during the SPC and not the patent term.

AUTHORISED AND MARKETED (ART.10.1)

An abridged approval may be obtained for the copy product if it is a generic product of a "reference medicinal product" authorised for not less than 10 years in a Member State or in the Community. The concept of marketing is no longer relevant. This is an old request from the generic industry. The text of the Commission is not completely clear, as it does not specify whether or not the reference product still has to be authorised when the abridged application is submitted or when it is approved.

SAME ACTIVE PRINCIPLE (ART.10.2.B)

The proposal of the Commission still uses the words active principle, [FN18] which is less clear than active substance or active ingredient. It also does not clarify in the draft legislation whether or not salts, esters and derivatives should be identical and the consequences of non-identity.

FROM ESSENTIAL SIMILARITY TO GENERIC AND REFERENCE PRODUCTS (ART.10.1, 10.2 AND 6)

The Commission proposal no longer refers to the concept of essentially similar products. To be authorised a copy product should be a "generic of a reference product", which is a medicinal product developed by an innovator and authorised under Art.6. The reading of Arts 10.1 and 10.2 gives the impression that the changes are minimal with regards to the current legislation. However, important modifications are included in Art.6 where the Commission modifies the criteria set up by the ECJ in the Generics decision regarding pharmaceutical form and possibly bio-equivalence.

PHARMACEUTICAL FORM (ART.10.2.B)

This term is also not defined in the current legislation but it should be noted that the draft proposal specifies that the "various immediate-release oral pharmaceutical forms are deemed to be one and the same pharmaceutical form".

In addition, Art.6.1 states that "the various strengths, pharmaceutical forms, administration routes, presentations and any variation under Article 35 shall be authorized under this paragraph and shall be considered as part of the same authorization". [FN19] Contrary to what the Generics judgment implies, data related to a new pharmaceutical form of the same active ingredient and developed after the first marketing approval no longer benefit from a protection of their own. The Commission proposes the endorsement of the NTA on the definition of reference medicinal product. [FN20]

BIO-EQUIVALENCE (ART.10.2.B)

The requirement that the generic product has to be bio-equivalent with the original (reference) product is formally maintained in Art.10.2.b. This does not automatically imply that a bioavailability study should be provided. Bioavailability studies may not be required if the applicant can demonstrate that the products meet the criteria of Annex I, which does not currently exist.

More importantly the above-mentioned Art.6.1 creates uncertainties regarding bio-equivalence. Are changes in bio-equivalence to be considered as a variation? In any event, in a number of cases new pharmaceutical forms or administration routes involve non bio-equivalence. Therefore one could question whether product developments, which result in different bio-equivalence, are protected any longer. As a result, the generic company may try to argue that it can freely choose to be bio-equivalent to the first product or to any [FN21] second product of an active substance that has been approved for less than 10 years and whose bio-equivalence is different. This seems in complete opposition with the criteria of the Generics judgment.

Finally, the definition in the proposed legislation omits the crucial proviso about “unless it differs significantly in term of safety and efficacy”.

Main amendments proposed by the European Parliament (“EP”)

During its plenary session of October 23, 2002 the EP adopted a number of amendments relevant for Regulatory Data Protection and related issues.

***96** Amendment 35 would allow generic companies to submit abridged applications after eight years. However the marketing authorisation cannot be granted until 10 years have elapsed from the first authorisation of the reference product (Amendments 34, 202 and 167-Art.10.1). As registration of a generic product takes from nine months to more than two years, this amendment de facto undermines the practical impact of an harmonised 10-year period of Regulatory Data Protection.

The additional year proposed by the Commission is maintained and the EP explicitly specifies that extension should not go beyond 11 years (Amendment 35-Art.10.1.2). However, the EP also proposes a three-year additional period of Regulatory Data Protection for “a new indication for a well-established substance” provided that significant pre-clinical or clinical studies were carried out in relation to a new indication (Amendment 40-Art.10.4.a). The wording of the two amendments is potentially contradictory.

With respect to Art.6 (see above comments on bio-equivalence) an EP amendment no longer provides that “the various strengths, pharmaceutical forms, administration routes, presentations and any variation under Art.35 shall be authorized under this paragraph and shall be considered as part of the same authorization” (Amendment 155). The EP also proposes a stricter definition of generic medicinal product, requiring chemical identity in term of isomer, complex, crystal polymorphic form salt, ester as well as the same pharmaceutical form, and bio-equivalence (Amendment 156, Art.10.2; ba).

On Bolar, amendments were passed, which, among other things, would allow export and manufacture by generic companies in the EU during the patent/SPC term. These include the case where a third country has issued a compulsory license (Amendments 134 and 196, Art.10.4).

If, in the context of an abridged application, the reference product is “absent from a Member State”, this latter may ask another Member State, where the product has been authorised for at least 10 years, to transmit the complete dossier within 30 days (Amendment 36—Art.10.1.a). This would allow generic registration in the Member State where the abridged application has been submitted and may simply clarify the Commission’s wording on Art.10.1 in fine.

There are also amendments related to bio-generics and to bridging data. The next steps in the legislative process involve the Member States’ work through the Council to reach political agreement on the Commission proposal, taking into account the position of the EP.

CONCLUSION

The Commission has reportedly made its proposal as an attempt to present a balanced package “to improve the competitiveness of both the innovative pharmaceutical and the generic industrial sectors”. [FN22]

There are two measures that are welcomed by the innovative industry: the harmonisation of the protection period to 10 years, and the possible extension of one year to reward further development work. However, it should be emphasised that these measures will have a limited impact when compared with the current situation.

Harmonisation to 10 years will take place albeit in a context where registration dossiers already benefit from ten years protection in the majority of situations: all centrally approved medicinal products (mandatory for biotech and high tech products) and nationally approved products in the following EU countries: he United Kingdom, France, Germany, Italy, Sweden, Belgium, the Netherlands and Luxembourg. [FN23] The comparison with the United States data protection system where the basic period of protection is five years, with the possibility of additional periods of three years for line extensions, is not relevant. In the United States no price negotiation process or MRP undercuts the data protection period. Prices are also far higher and therefore companies can recoup their investments more rapidly. In this context the EP amendment to allow submission of abridged applications after eight years is certainly not welcomed by the innovative industry but on the other hand the possible additional three-years protection for well-established substances is a positive step.

Regarding the protection of new indications, one should not neglect the fact that nearly 25 per cent of the Essential Drug List of the WHO refers to additional indications, which were not initially approved. [FN24] From a public health standpoint, this fact demonstrates that this is a key issue and it is legitimate that the Commission tries to promote this kind of development as new indications are in many instances not patentable, even if they are important for patients and public health. However, the granting of an additional year is subject to very restrictive conditions (significant clinical benefit in comparison with existing therapies, approval within the eight years following the first marketing approval) that may reduce its impact in practice. In addition, this extension could be obtained only once. If another new important indication appears possible, no incentive will be provided.

In order to facilitate generic entry the proposal contains a number of measures of commercial value from a generic standpoint. The introduction of a Bolar-type provision, which is supposed to allow generic entry immediately after patent expiry is clearly an important concession required from the innovative industry. From a political standpoint this issue was the focal point of opposition between the generic and the innovative industry during most of the 1990s. The compatibility with TRIPs of the amendments proposed by the EP is, at least, questionable.

The Commission is also making important concessions in favour of the generic sector regarding pharmaceutical forms. The generic copier would be able to benefit from all new pharmaceutical forms developed ***97** by any innovator after the first marketing approval. The same might be true regarding difference in bio-equivalence but this is much less clear. These concessions are based on the perception that the innovator will continue to develop the existing products and will simply accept and rely on the remaining term of the initial protection. If adopted, this may work in certain circumstances but in many others it may not favour generic entry and simply lead innovative companies to abandon certain useful developments and to focus on protectable developments only. However the adoption by the EP of Amendment 155 seems to undermine the Commission's proposal.

As a conclusion, despite some positive signals for the innovative industry, which are justified by public health concerns as well as a better integration of the internal market, the Commission's proposal seems at this stage quite favourable to the interests of the generic industry. The EP has also provided very mixed and contradictory signals. In this context, the final outcome of the negotiation between the Council, the EP and the Commission seems, at this stage, unpredictable. If final decision cannot be reached before May 2004, accession countries will become Member States and probably consensus on the draft legislation may become more difficult.

END NOTES

FN1. COM(201) 404 final, 2001/253 (COD), November 26, 2001.

FN2. Which codifies the old text of Directive 65/65 as modified in 1987 (previous Art.4.8.a.iii).

FN3. When, exceptionally, a generic company decides to make a specific development.

FN4. Decision in Case C-368/96, December 3, 1998.

FN5. Case C-106/01.

FN6. Case C-368/96, Opinion of the Advocate General, Recital 37.

FN7. District Court of Arnhem, reg. No Awb 01/1769, December 20, 2001.

FN8. Case C-221/01.

FN9. The last version dates from May 2001; http:/pharmacos. Eudra.org/F2/home.html.

FN10. NTA, Vol.2A, Ch.1, May 2001, 4.2, at p.12.

FN11. ibid.

FN12. ibid. at p.11.

FN13. One should not confuse pharmaceutical form and dosage forms. The Generics judgment is clear: a copy company can benefit from all the dosage forms from the originator provided that they all belong to the same pharmaceutical form.

FN14. NTA, Vol.2A, Ch.1, May 2001, 4.2, at p.11.

FN15. ibid. at p.14.

FN16. http:/pharmacos.Eudra.org/F2/review/doc/codehumain_11-2001_en.pdf.

FN17. EU Canada WT/DS114.

FN18. Art.10.2.b. See also Arts 10.3 and 10.b, which refer to the words active substance. However, the French version of Art.10.2.b refers also to "substances actives".

FN19. This should not be confused with Art.10.3, which refers to new indications, strength and pharmaceutical form, which were never submitted beforehand.

FN20. NTA, Vol. 2A, Ch.1, May 2001, 4.2, at p.11. It is however symptomatic that the Commission found it necessary to confirm, in the draft legislation, its view on pharmaceutical form as expressed in the NTA but did not do it on salts and esters.

FN21. Meaning developed by the originator or by any other innovative company.

FN22. Commission press release, IP/01/1027, July 18, 2001.

FN23. And even Spain in practice.

FN24. L. Wastila, M. Ulcickas and L. Lasagna, "The World Health Organization's Essential Drug List; The Significance of Me-too and Follow-on Research" (1989) 3 Journal of Clinical Research and Drug Development 105-115.

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