

Patenting Business Methods in Europe: What Lies Ahead?

MATTHEW E. FINK*

TABLE OF CONTENTS

INTRODUCTION.....	299
I. THE CONTROVERSY SURROUNDING BUSINESS METHOD PATENTS	300
II. PATENTING BUSINESS METHODS IN EUROPE.....	305
A. <i>Overview of the European Patent System</i>	305
B. <i>Requirements for Patentability Under the EPC</i>	306
C. <i>Patentability of Business Methods Under the EPC</i>	307
D. <i>EPO Case Law Regarding the Patentability of Business Methods</i>	307
E. <i>The Treatment of Business Method Patents in the National Courts</i>	311
III. THE FUTURE OF BUSINESS METHOD PATENTS IN EUROPE	312
A. <i>Follow the United States?</i>	312
1. <i>Patentability of Business Methods in the United States</i>	313
2. <i>Analysis of the United States' Approach</i>	314
B. <i>The Commission Proposal for a Directive of the European Parliament and of the Council on the Patentability of Computer Implemented Inventions</i>	314
1. <i>Overview of the Proposal</i>	315
2. <i>Analysis of the Approach Adopted by the Proposal</i>	317
C. <i>An Alternative Course of Action</i>	318
CONCLUSION.....	321

INTRODUCTION

Business methods¹ have historically been excluded from patentability in both Europe and the United States. In 1998, however, the United States officially recognized the validity of business method patents through the Federal Circuit's controversial decision of *State Street Bank Co. & Trust v. Signature Financial Group, Inc.*,² marking a clear divergence between United States and European patent law. Since that decision, thousands of applications have been filed for business method patents,³ spurring an international debate over the propriety of

* J.D. Candidate, 2004, Indiana University School of Law—Bloomington; B.A., 2001, DePauw University. I would like to thank Professor Marshall Leaffer for his help and guidance throughout this Note-writing process. I would also like to thank my wife, Kim, for her love, support, and endless encouragement.

1. For the purposes of this Note, a business method can be defined as “a method of . . . administering, managing, or otherwise operating an enterprise or organization, including a technique used in doing or conducting business.” H.R. 5364, 106th Cong. § 2 (2000), available at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=106_cong_bills&docid=f:h5364ih.txt.pdf (last visited Jan. 23, 2004). Furthermore, note that a claim for a business method can be directed either at the method itself—a sequence of steps that can be performed to obtain a particular result—or at the means used to carry out the method, such as a computer.

2. 149 F.3d 1368 (Fed. Cir. 1998) (allowing a patent for a computerized business method that aided in the management of mutual fund assets).

3. See, e.g., Press Release, U.S. Patent & Trademark Office, USPTO Seeks Public Comment on Prior Art Searches for Business Method Patents (June 12, 2001) (“Applications for software-implemented business method patents grew from 170 in 1995 to 7,800 in

allowing such patents.

Although European patent law explicitly excludes business method patents, some business method patents have in fact been granted in Europe, albeit to a much more limited extent.⁴ It should come as no surprise, therefore, that the current law regarding the patentability of business methods in Europe is rather ambiguous.⁵ This Note will attempt to clarify Europe's current law regarding the patentability of business methods; it will then discuss the most likely courses of action that Europe may take in order to clarify those laws; and it will conclude with a proposal for a suggested course of action.

Part I of this Note will introduce the controversy surrounding business method patents, analyze the primary arguments for and against granting such patents, and consider the unique significance business method patents may have in the Internet business sector. Part II will then present a brief overview of European patent law and will conclude with an analysis of Europe's current treatment of business method patents. Finally, Part III will consider the possible future developments that might occur in European law regarding the patentability of business methods and will propose a suggested course of action.

I. THE CONTROVERSY SURROUNDING BUSINESS METHOD PATENTS

Much of the controversy over business method patents is a result of the large number of such patents that have been granted in the United States since the *State Street Bank Co. & Trust* decision that are of low quality or seem to be invalid.⁶ The most publicized examples of such patents are Priceline.com's patent on a method for selling airline tickets online using a "reverse auction"⁷ and Amazon.com's so-called "one-click" patent for a method of online shopping,⁸ although there are numerous other examples that are much more disconcerting. Consider, for example, the following recently granted business method patent:

2000."), <http://www.uspto.gov/web/offices/com/speeches/01-25.htm> (last visited Jan. 23, 2004).

4. See *infra* Part II.D.

5. See *infra* Part II.

6. See, e.g., Brian P. Biddinger, *Limiting the Business Method Patent: A Comparison and Proposed Alignment of the European, Japanese, and United States Patent Law*, 69 *FORDHAM L. REV.* 2523, 2523-24 (2001) (discussing "the recent exploitation of patent protection for business methods"); Rochelle Cooper Dreyfuss, *Are Business Method Patents Bad for Business?*, 16 *SANTA CLARA COMPUTER & HIGH TECH. L.J.* 263, 267-268 (2000) (noting that many of the criticisms regarding business method patents are based on "the frequency with which the Patent Office issues patents on shockingly mundane inventions").

7. U.S. Patent No. 5,897,620 (issued Apr. 27, 1999), <http://www.uspto.gov/patft/index.html> (last visited Jan. 23, 2004). See also Eugene R. Quimn, Jr., *The Proliferation of Electronic Commerce: Don't Blame the PTO*, 28 *RUTGERS COMPUTER & TECH. L.J.* 121, 122 (2002) ("This patent . . . apparently gives Priceline.com the exclusive right to what is known as a Dutch auction, something that is hardly new or nonobvious."); Dreyfuss, *supra* note 6, at 268 (noting that a reverse auction, also called a Dutch auction, has been used for years by the U.S. Treasury Department to sell bonds).

8. U.S. Patent No. 5,960,411 (issued Sept. 28, 1999), <http://www.uspto.gov/patft/index.html> (last visited Jan. 23, 2004).

An exercise device and business method for employing an existing plastic container as the exercise device. The exercise device is an existing plastic container originally used as a container for a conventional consumer product. Upon depletion of the original contents, the container is to be used as an exercise device by filling it with a suitable benign filler to a level of interest in order to establish a desired weight of the container The associated business method involves the application to the container of instructions for the new use of the container as an exercise device and the associated environmental and health benefits related to recycling of the container as the exercise device.⁹

As Professor Robert J. Hart put it, this “invention” is essentially “a ‘Business Method’ comprising sticking a label on an old bucket with instructions to fill it and lift it in order to take some exercise.”¹⁰ Another patent was granted for a method for training janitors by showing the trainees a series of pictures in a binder;¹¹ and another was granted for a self-proclaimed “business method” for quickly choosing and measuring the correct spices for specific cuisines.¹²

These low-quality business method patents that the United States Patent and Trademark Office (“USPTO”) has granted may not, however, be a reliable indicator that business method patents in general are a bad idea.¹³ Indeed, most of such patents probably should have been rejected on obviousness or novelty grounds rather than as excluded subject matter.¹⁴ The fact that a disproportionate number of low-quality, seemingly invalid patents are being granted for business methods is most likely a result of the only recent endorsement of business method patents in the United States; which means that there is very little prior art with which business method claims can be compared, making it difficult to prove obviousness.¹⁵ Moreover, the USPTO was simply not prepared to handle the massive influx of business method claims post-*State Street Bank Co. & Trust*.¹⁶ Patent examiners, for example, currently have very little experience in dealing with claims for business methods and are therefore more likely to overlook grounds for invalidation.¹⁷ The implication, therefore, is not that business method patents are inherently deficient

9. U.S. Patent No. 6,241,641 (issued June 5, 2001), <http://www.uspto.gov/patft/index.html> (last visited Jan. 23, 2004).

10. Robert J. Hart, *Business Method Patents—The Oxford University Said Business School Research Project—Interim Report*, TENTH ANN. CONF. ON INT’L INTELL. PROP. L. & POL’Y (Fordham Univ. School of Law), Apr. 4 & 5, 2002, at 4 (on file with author).

11. See U.S. Patent No. 5,851,117 (issued Dec. 28, 1998), <http://www.uspto.gov/patft/index.html> (last visited Jan. 23, 2004).

12. See U.S. Patent No. 6,349,820 (issued Feb. 26, 2002), <http://www.uspto.gov/patft/index.html> (last visited Jan. 23, 2004).

13. See Greg S. Fine, *To Issue or Not to Issue: Analysis of the Business Method Patent Controversy on the Internet*, 42 B.C. L. REV. 1195, 1210-11 (2001).

14. See *id.* at 1210. For a discussion of the novelty and nonobviousness requirements for patentability, see *infra* notes 56-57, 121 and accompanying text.

15. See Quinn, *supra* note 7, at 123 (“[P]atent examiners are simply too overworked and do not have the proper resources to examine patent applications in a manner likely to result in the weeding out of patents that ought not see the light of day.”).

16. See *id.*

17. See *id.*

but simply that more time and effort is needed to bring the quality of such patents up to par.¹⁸

Most other arguments against allowing patents for business methods concern the societal ramifications of granting such patents. According to this argument, granting patents for business methods would not further the goals of the patent system and may even be detrimental to the economy.¹⁹ Proponents of this argument will point out that there was no (or very little) patent protection for business methods prior to 1998, yet businesses still managed to thrive, and business methods have clearly evolved a great deal through the years.²⁰ The obvious counterargument, however, is that there is also no evidence that innovation would not have been even more substantial in the business services sector, had patent protection been available. The point is that, without reliable empirical data, scholars can only speculate as to the propriety of granting patents for business methods, which requires an analysis of the propriety of the patent system itself.

The patent system was designed to encourage innovation and the disclosure of new inventions.²¹ It accomplishes this by granting a limited monopoly to those who have developed a new and innovative product or process.²² The rationale is that granting this monopoly will provide the necessary incentive for businesses and solo inventors to invest in the research and development necessary to develop such products.²³ Without these monopoly rights, there would be nothing to prevent competitors from capitalizing, or "free-riding," on another's invention without contributing to the costs of developing the invention, which would discourage businesses/inventors from ever expending the costs for research and development

18. Fine, *supra* note 13, at 1210. Fine summarized the argument as follows:

These quality arguments . . . are rendered nugatory by the wait-and-see urgings of some pro-[business method patent] commentators. By definition, the prior art database will improve as a result of the influx of patent applications. The PTO has already gone on record saying that they will make the appropriate increases in manpower and expertise to provide the necessary reviews of the patent applications. Thus, with greater wealth of prior art to evaluate novelty and greater resources to ensure that patent applications are not overly broad, the major causes of poor quality patents are being eliminated.

Id.

19. *E.g.*, Biddinger, *supra* note 6, at 2525 ("[P]atents for business methods are not justifiable under any existing policy and business method patents may actually be economically detrimental."); Leo J. Raskind, *The State Street Bank Decision: The Bad Business of Unlimited Patent Protection for Methods of Doing Business*, 10 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 61, 64 (1999) ("[T]he economic analysis of patent protection does not support the extension of patent protection to methods of doing business.").

20. *See, e.g.*, Raskind, *supra* note 19, at 78 ("In the absence of data showing a need to spur innovation in business methods, it is equally plausible that the spur of competition and the long tradition of competition by emulation have been sufficient to provide an adequate level of innovation in methods of doing business.").

21. *See, e.g.*, JOHN GLADSTONE MILLS III ET AL., PATENT LAW FUNDAMENTALS § 1:2, 1-5 (2d ed. 2002) ("The reason for a patent system is to encourage innovation and . . . to bring new designs and technologies into the public domain through disclosure.").

22. *See id.*

23. *See id.*

in the first place.²⁴

The flipside of this rationale is, of course, that it gives an unfair advantage to holders of patent rights and therefore can stifle competition—the result of which is typically an increase in price and a decrease in quality and quantity of the patented product.²⁵ Therefore, a successful patent system must strike a balance between these conflicting interests by creating carefully designed limits to patent protection.²⁶

Granting patents also provides the benefit of disclosure.²⁷ If the patent system did not exist, businesses would surely try their best to keep their innovations secret in order to gain a competitive advantage. Under the current patent system, however, all inventions, including sufficient instructions for reproducing the inventions, are disclosed to the public once they are granted patent protection. This makes it possible for anyone to build upon another's patented invention, which will theoretically increase innovation for society as a whole.²⁸

Some opponents of business method patents argue that these policies of encouraging innovation and disclosure do not apply to business method patents. First, they point out that the benefit of disclosure rarely applies at all in the business method context, since a business method obviously cannot be kept secret if it is openly practiced in the market.²⁹ Second, they argue that monopoly rights are not necessary for business methods since there are plenty of other incentives for innovation in that area.³⁰

One such incentive is the so-called “first-mover advantage.”³¹ According to this theory, businesses are motivated to develop new, innovative business methods because they will attract new customers, and those customers will be naturally more inclined to continue to bring their business to the same company rather than to switch to a competitor who later adopts the same method.³² Another, more general incentive is the prospect that many new, innovative business methods will reduce the costs of operating a particular business.³³ Businesses will always strive to be as cost-efficient as possible, and this incentive will exist regardless of whether competitors can copy the method. As one commentator put it, “business methods are their own reward.”³⁴ Surely, however, there will be some borderline cases where the competitive advantage gained from the development of a new business method will not exceed its costs, in which case patent protection would be needed

24. Fine, *supra* note 13, at 1197.

25. *See id.* at 1197-98; *see also* Larry A. DiMatteo, *The New “Problem” of Business Method Patents: The Convergence of National Patent Laws and International Internet Transactions*, 28 RUTGERS COMPUTER & TECH. L.J. 1, 24 (2002) (“The downside of the patent system's attempt to reward innovation is the potential for anti-competitive effects and misuse.”).

26. *See* Fine, *supra* note 13, at 1197-98.

27. *See* MILLS III ET AL., *supra* note 21 at 1-5.

28. *See id.*

29. *See* Dreyfuss, *supra* note 6, at 275.

30. *See id.*; *see also* Michal Likhovski, *Fighting the Patent Wars*, 23 EUR. INTELL. PROP. REV. 267, 272 (2001).

31. *See* Likhovski, *supra* note 30, at 272.

32. *See id.*

33. *See id.*

34. Dreyfuss, *supra* note 6, at 275.

to spur further innovation.³⁵

While incentives other than patent protection no doubt exist and no doubt weigh against the patenting of business methods, it is important to note that these incentives are not unique to business methods. On the contrary, such incentives exist in a variety of contexts. The "first-mover advantage," for example, is applicable in nearly all industries: if a company develops any new and innovative product or service, it will naturally have the first opportunity to exploit that product or service and to establish an ongoing relationship with customers. Similarly, many new inventions are created for the sake of reducing business operating costs: would construction workers still be using picks and shovels if not for the patent system? The point is that most of the social policy arguments that have been raised against business method patents are better classified as arguments against the patent system as a whole and therefore do not necessarily support the singling out of business method patents for exclusion.³⁶

Admittedly, the need to encourage innovation and disclosure of new business methods seems small when compared to other industries where the need for patent protection is more clear. The case for allowing business method patents becomes stronger, however, when considered in the context of the Internet business sector, where there arguably is a significant need for patent protection.³⁷ This argument was articulated well by Professor Greg S. Fine, who observed that business method patents are especially important to Internet companies because "[f]or many Internet companies, the business method is the business."³⁸ Since many Internet companies simply provide "consumers easy access to products or services of other companies[,] . . . it is the business technique that implements the interface that defines the company."³⁹ If these companies could not patent their business methods, "innovation would be stifled in that entrepreneurs would never get off the ground."⁴⁰

In sum, a variety of compelling arguments against business method patents have been offered recently, but none show conclusively that business methods are so unique as to warrant complete exclusion from patentability. The sudden endorsement of such patents in the United States and the resulting massive influx of business method claims have resulted in a number of low-quality and perhaps invalid patents being granted, but this undesirable state of affairs is most likely only temporary and will improve with time. Furthermore, although there is reason to believe that patent protection is not needed for business method patents since there are other incentives to spur innovation in that area, such alternative incentives are not unique to business methods; therefore arguments based on this line of reasoning are better directed to the patent system overall. Finally, the case for allowing

35. See, e.g., Fine, *supra* note 13, at 1212-13 (arguing that patent protection for business methods is vital in the online context because "[f]or many Internet companies, the business method is the business").

36. See *id.* at 1213 ("Most of the criticism [of business method patents] . . . seems like an underlying indictment of the patent system overall.").

37. See Fine, *supra* note 13, at 1212-13. *But see* Raskind, *supra* note 19, at 67 ("If the boom in business method patents continues at its accelerating pace, the so-called superhighway of electronic commerce could be partially converted into a toll road.").

38. Fine, *supra* note 13, at 1212.

39. *Id.*

40. *Id.* at 1213.

business method patents has become more persuasive with the advent of the Internet, as business method patents may be imperative to the survival of many Internet companies.

II. PATENTING BUSINESS METHODS IN EUROPE

In general, Europe has been very skeptical about patenting business methods,⁴¹ although some business method patents have in fact been granted.⁴² To understand the rather complicated approach to business method patents that currently exists in Europe, however, it is first necessary to have a working knowledge of the European patent system.

A. Overview of the European Patent System

A centralized European patent system was created when each of the member states of the European Community, as well as several other states, signed a treaty entitled the European Patent Convention (“EPC”).⁴³ The major function of this treaty was to establish a single patent application procedure that is binding on all of the contracting states.⁴⁴ In effect, an application can now be filed with the European Patent Office (“EPO”) and, if successful, the resulting patent will be enforceable in each of the contracting states, just as if the applicant had filed successful applications in each state individually.⁴⁵

The EPC also sets up a system for the adjudication of patent disputes. Appeals of EPO decisions are heard by the EPO “Boards of Appeal”⁴⁶ and by the “Enlarged Board of Appeal,”⁴⁷ which is the highest court. Infringement actions, however, are handled by the national courts, based on national patent law.⁴⁸ This is of particular importance since, although each EPC country’s patent laws now conform to the EPC, national courts have discretion to interpret the EPC independently.⁴⁹ This creates the potential for divergence of law between EPC countries, which goes contrary to the original purpose of the EPC itself.⁵⁰

41. See, e.g., The Patentability of Computer Programs: Discussion of European-Level Legislation in the Field of Patents for Software, EUR. PARL. DOC. (JURI 107 EN) 21 (2002) (“To many European observers business method patents represent a horrific prospect—yet another example of unwanted ‘Americanisation’.”), http://www4.europarl.eu.int/estudies/internet/workingpapers/juri/pdf/107_en.pdf (last visited Jan. 23, 2004) [hereinafter Patentability of Computer Programs].

42. See *infra* Part II.D.

43. European Patent Convention, Oct. 5, 1973, 1065 U.N.T.S. 255, http://www3.european-patent-office.org/dwld/epc/epc_2002_v1.pdf (last visited Jan. 23, 2004) [hereinafter European Patent Convention].

44. *Id.*, pmbl., at 24.

45. *Id.*, art. 2, at 26.

46. *Id.*, art. 21, at 42.

47. *Id.*, art. 22, at 42-44.

48. *Id.*, art. 74, at 88.

49. See Keith Beresford, *Business Method Patents: How to Protect Your Clients’ Interests*, in BUSINESS METHODS PATENTS: HOW TO PROTECT YOUR CLIENTS’ INTERESTS 37, 50-54 (Jeffrey A. Berkowitz chair, 2001).

50. *Id.* at 53-54.

B. Requirements for Patentability Under the EPC

According to article 52(1) of the EPC, "European patents shall be granted for any inventions which are susceptible of industrial application, which are new and which are not obvious."⁵¹ Article 57 explains that the requirement that the patent be "susceptible of industrial application" is satisfied as long as the invention "can be made or used in any kind of industry, including agriculture."⁵² The novelty requirement is expounded in article 54, which states that "[a]n invention shall be considered to be new if it does not form part of the state of the art."⁵³ Finally, article 56 states that the requirement that the invention be nonobvious (called the "inventive step" requirement) is satisfied if the invention is not "obvious to a person skilled in the art."⁵⁴

It has also generally been assumed that an invention must also have a "technical character" in order to be patentable under the EPC.⁵⁵ This extra requirement most likely derives from rule 27 of the Implementing Regulations to the Convention on the Grant of European Patents,⁵⁶ which states that the patent specification must "specify the technical field to which the invention relates,"⁵⁷ although some argue that the requirement is implicit in the meaning of "industrial application."⁵⁸ Whatever its origin, the "technical character" requirement is now firmly established in European patent law.

The subsequent sections of article 52 qualify 52(1)'s definition of patentable subject matter by listing several categories of subject matter that are excluded from patentability.⁵⁹ Examples of these explicit exclusions are discoveries, scientific theories, computer programs, and, most importantly for the purposes of this Note, methods of doing business.⁶⁰ These exclusions are tempered somewhat, however, by article 52(3), which states that such subject matter is only excluded to the extent that the "patent relates to such subject-matter or activities *as such*."⁶¹

Although there has been some divergence in the case law regarding the further elements that must be present in order for excluded subject matter to surpass this "as such" classification and thus become patentable,⁶² the EPO Board of Appeal has generally held that computer programs and business methods become patentable subject matter if they satisfy the "technical character" requirement.⁶³

51. European Patent Convention, *supra* note 43, art. 53, at 70.

52. *Id.* at 74.

53. *Id.* at 72.

54. *Id.* at 74.

55. Patentability of Computer Programs, *supra* note 41, at 4.

56. *Id.*

57. European Patent Convention, *supra* note 43, r. 27, at 244.

58. *E.g.*, John R. Thomas, *The Patenting of the Liberal Professions*, 40 B.C. L. REV. 1139, 1181-83 (1999).

59. European Patent Convention, *supra* note 43, art. 52, at 70.

60. *See id.*

61. *Id.* (emphasis added).

62. *See infra* Part II.E.

63. *See infra* Part II.D.

C. Patentability of Business Methods Under the EPC

Despite the explicit exclusion of business method patents under the EPC, some business methods are in fact patentable in limited circumstances, under the theory that they constitute more than just business methods “as such.”⁶⁴ In 2000, the president of the EPO attempted to clarify the EPO’s position on the patentability of business methods.⁶⁵ First, he distinguished between (1) business methods “in abstract, i.e. not specifying any apparatus used in carrying out the method,” (2) business methods that are implemented through a computer, and (3) business methods that are implemented through some “other apparatus.”⁶⁶ Second, he explained that the first category of business methods, “abstract” business methods, are business methods “as such” and therefore excluded from patentability.⁶⁷ Third, he explained that the remaining two categories of business methods should be examined “using the same scheme for examination as for computer[-implemented inventions].”⁶⁸

In the next section of the report, the EPO president outlines the procedure for examining computer-implemented inventions. First, he states that such inventions are “presumed, prima facie, not to be excluded from patentability” and that “[t]he subject-matter of the claim is therefore to be examined for novelty and inventive step.”⁶⁹ He then explains that some aspect of the invention must solve an “objective technical problem.”⁷⁰ If it does not, it will be “rejected on the ground that its subject-matter lacks an inventive step.”⁷¹

In sum, according to the president of the EPO, business methods are not excluded by articles 52(2) and 52(3) if they are carried out through some apparatus (such as a computer), but they must solve an “objective technical problem” in order to satisfy the inventive step requirement.

D. EPO Case Law Regarding the Patentability of Business Methods

In his paper, the president of the EPO emphasized that the EPO’s current approach to business method patents is in line with the Board of Appeal’s decision in *Sohei/General-Purpose Management System*.⁷² This is particularly significant because the patent granted in *Sohei* can easily be classified as a business method, and it is difficult, at least at first glance, to ascertain how the invention solved an “objective technical problem.” The invention at issue simplified general business

64. See *infra* notes 59-61 and accompanying text.

65. President of the European Patent Office, Appendix 6 Examination of “Business Method” Applications (EPO) (May 19, 2000), <http://www.uspto.gov/web/tws/appendix6.pdf> (last visited Jan. 23, 2004) [hereinafter Appendix 6].

66. *Id.* at 3.

67. *Id.*

68. *Id.*

69. *Id.* at 5.

70. *Id.*

71. *Id.*

72. See *Sohei/General-Purpose Management System*, Case T 0769/92, [1996] E.P.O.R. 253, 255-56 (EPO Technical Bd. App. 1994), reprinted in 6 CHARTERED INSTITUTE OF PATENT AGENTS, EUROPEAN PATENTS HANDBOOK § 103 (2d ed. 1998), available at <http://legal.european-patent-office.org/dg3/pdf/t920769ex1.pdf> (last visited Jan. 23, 2004).

management by allowing operators to enter data relating to either inventory management or financial management into a single user interface (called a “transfer slip”) and by processing that data and transferring it to the appropriate files.⁷³ Prior to the invention, inventory management and financial management were apparently handled separately from each other. Hence, the primary purpose of the invention was simply to make existing general management systems more “user friendl[y].”⁷⁴

So what “objective technical problem” did the invention in *Sohei* solve? To answer this question, the Board of Appeal focused on the fact that the invention combined two previously independent “systems”: “[T]wo kinds of systems . . . are combined by a common input device . . . , allowing each of the entered items necessary for use in one of said systems . . . to be used, if required, also in the other . . . and vice versa.”⁷⁵ The Board held that the underlying file structures and processes that were devised to combine the management systems involved “technical considerations to be regarded as resulting in a technical contribution to the art.”⁷⁶ The Board justified this holding by drawing a distinction between the “technical problem” solved by an invention and the “object” of an invention.⁷⁷ Thus, the fact that the finished invention was intended to be used to conduct business did not render the invention unpatentable since at least one “component” of the invention solved a technical problem.⁷⁸

The Board of Appeal made a similar distinction between the object of an invention and the technical problem solved by an invention in the *Pettersson/Queuing System*⁷⁹ decision, albeit with a slight twist. The invention at issue in *Pettersson* was a “[s]ystem for determining the queue sequence for serving customers.”⁸⁰ This claim was challenged on the ground that the “system” is nothing more than a “method for doing business.”⁸¹ The Board disagreed stating, “The claimed apparatus is clearly technical in nature. . . . The fact that one such practical application of such apparatus concerns the service of customers of ‘a business equipment’ does not mean that the claimed subject-matter must be equated with a

73. *Id.*

74. See Beresford, *supra* note 49, at 62-64 (arguing that *Sohei/General-Purpose Management System* is “a good example of user convenience satisfying the need for a technical effect”).

75. *Sohei/General-Purpose Management System*, [1996] E.P.O.R. at 262, reprinted in 6 CHARTERED INSTITUTE OF PATENT AGENTS, EUROPEAN PATENTS HANDBOOK § 103 (2d ed. 1998), available at <http://legal.european-patent-office.org/dg3/pdf/t920769ex1.pdf> (last visited Jan. 23, 2004).

76. *Id.* at 263.

77. See *id.* at 264.

78. See *id.* at 261 (“It follows from the afore-mentioned case law that subject-matter is not excluded from patentability if it involves, or implies, at least one aspect, or component, which is not excluded.”); see also Appendix 6, *supra* note 65, at 6 (“It should be emphasised that, according to *Sohei*, the computer implementation of a, for example, business method, can involve ‘technical considerations’, and therefore be considered the solution of a technical problem, if implementation features are claimed.”).

79. Case T 1002/92, [1996] E.P.O.R. 1 (EPO Technical Bd. App. 1994), reprinted in 6 CHARTERED INSTITUTE OF PATENT AGENTS, EUROPEAN PATENTS HANDBOOK § 103 (2d ed. 1998), available at <http://legal.european-patent-office.org/dg3/pdf/t921002ex1.pdf> (last visited Jan. 23, 2004).

80. *Id.* at 3.

81. *Id.*

method of doing business, as such.”⁸²

In effect, the Board drew a distinction between business methods per se and business processes implemented through an “apparatus,” holding that only the latter is patentable subject matter.⁸³ Moreover, the Board applied reasoning similar to that used in *Sohei* in that it found that the invention solved a technical problem, thereby satisfying the inventive step requirement, even though the technical problem had nothing to do with the object of the invention. Specifically, the Board held, “The program-determined output signal of the hardware is used for an automatic control of the operation of another system component (information unit) and thus solves a problem which is completely of a technical nature.”⁸⁴ Hence, following *Sohei*, the specification of at least one component of the invention that required the solution of a technical problem was enough to show an inventive step.

Another Board of Appeal decision illustrating that the dispositive factors in determining the patentability of a business method are whether the method is implemented through an apparatus and whether at least one component of the invention solves a technical problem is *R. v. PBS Partnership/Controlling Pension Benefits Systems*.⁸⁵ That decision involved two core claims: one for “a method of controlling a pension benefits program” and another for an apparatus programmed to carry out the same method.⁸⁶ The Board dismissed the method claim on the ground that it constituted a business method “as such.”⁸⁷ The Board then explained that the claim for the computer implementation of the method did not constitute excluded subject matter: “[A] computer system suitably programmed for use in a particular field, even if that is the field of business and economy, has the character of a concrete apparatus . . . and is thus an invention within the meaning of Article 52(1)”⁸⁸

The Board went on, however, to reject the computer implementation on the ground that it lacked an inventive step.⁸⁹ The Board explained that “the improvement envisaged by the invention . . . is an essentially economic one, . . . [that is,] lies in the field of economy, which, therefore, cannot contribute to inventive step.”⁹⁰ In effect, the Board held that the “technical character” of the invention was not enough; the inventive step must be of a technical nature as well. This case-law-created requirement for computer-implemented inventions has been

82. *Id.* at 8 (citing IBM/Document Abstracting and Retrieving, Case T 22/85 [1990] E.P.O.R. 98, 103-04 (EPO Technical Bd. App. 1988) and IBM Card/Reader, Case T 854/90 [1994] E.P.O.R. 89, 95 (EPO Technical Bd. App. 1992)).

83. *Id.* at 8. This is in line with the view expounded by the president of the EPO. See *supra* notes 65-71 and accompanying text.

84. *Pettersson/Queuing System*, Case T 1002/92, [1996] E.P.O.R. at 9, reprinted in 6 CHARTERED INSTITUTE OF PATENT AGENTS, EUROPEAN PATENTS HANDBOOK § 103 (2d ed. 1998), available at <http://legal.european-patent-office.org/dg3/pdf/t920769ex1.pdf> (last visited Jan. 23, 2004).

85. Case T 0931/95, [2002] E.P.O.R. 52 (EPO Technical Bd. App. 2000), available at <http://legal.european-patent-office.org/dg3/pdf/t950931eu1.pdf> (last visited Jan. 23, 2004).

86. *Id.* at 524-26.

87. *Id.* at 528.

88. *Id.* at 530.

89. *Id.* at 532.

90. *Id.* The rationale of refusing to allow improvements lying in the “field of economy” to contribute to an invention’s inventive step, however, is suspect. See *infra* Part III.C.

dubbed the “technical contribution” requirement.⁹¹

At first glance, this seems inconsistent with *Sohei* and *Pettersson*, since the improvements envisioned in those decisions were also arguably economic—the end result of each invention was to make an aspect of business more efficient. The cases can be reconciled, however, by focusing on whether an “objective technical problem” was solved in each case. In *Sohei* the claim specified that the invention combined two previously unrelated systems,⁹² and in *Pettersson* the claim specified that the invention used output signals to “control . . . the operation of another system component.”⁹³ In each case, the Board held that these underlying functions of the inventions solved objective technical problems and therefore satisfied the inventive step requirement. In *Pension Benefits*, on the other hand, the claim failed to specify any underlying technical problem solved by the computer implementation and was therefore rejected.⁹⁴

The primary lesson to be learned from *Pension Benefits* is that a claim for a computer-implemented business method must specify some problem and corresponding solution relating to the functionality of the program or computer in order to satisfy the inventive step requirement; the inventiveness of the business method itself is apparently irrelevant.⁹⁵ This reasoning, however, is suspect. Why should the inventiveness of the business method not be taken into account when assessing the inventive step? What policy is furthered by granting patents for reasons unconcerned with the practical utility of the claimed inventions?⁹⁶

It is true that business methods are excluded from patentability unless they are carried out through a computer or similar apparatus, but the same is true for computer programs, and the inventiveness of computer programs is routinely taken into account—and is usually the dispositive factor—in determining whether a computer-implemented invention involves an inventive step.⁹⁷ Apparently, the Board of Appeal has simply decided that computer programming is inherently “technical” and thus worthy of contributing to an invention’s inventive step, but business methods, or inventions relating to “the field of economy,” are inherently non-technical and thus not worthy. Interestingly, neither the Board nor any other EPO authority has ever cited any policy that is furthered by drawing this seemingly

91. See, e.g., Beresford, *supra* note 49, at 58-60.

92. See *supra* notes 75-76 and accompanying text.

93. See *supra* note 84 and accompanying text.

94. See *R. v. PBS Partnership/Controlling Pension Benefits Sys.*, Case T 0931/95 [2002] E.P.O.R. at 525-28, reprinted in 6 CHARTERED INSTITUTE OF PATENT AGENTS, EUROPEAN PATENTS HANDBOOK § 103 (2d ed. 1998), available at <http://legal.european-patent-office.org/dg3/pdf/t920769ex1.pdf> (last visited Jan. 23, 2004); see also Patentability of Computer Programs, *supra* note 41, at 7 (“In this case the technical contribution rather than the technical character of the invention was considered decisive.”) (emphasis in original).

95. Some commentators have suggested that this is mainly an exercise of proper claim-drafting, having little or nothing to do with actual inventiveness. See generally Beresford, *supra* note 49 (explaining how to draft successful claims for business method patents in Europe).

96. See Patentability of Computer Programs, *supra* note 41, at 34 (suggesting that the technical contribution requirement is inadequate because it “ignores the basic premises of the patent system”).

97. The *Sohei* and *Pettersson* decisions discussed in this Part are examples of patents in which the inventive step was found in the underlying computer program.

arbitrary distinction.⁹⁸

To summarize, the EPO's current approach to claims for business methods is as follows. If the claimed invention is a method of conducting business that is disconnected from any means for carrying out that method, it will fail as a matter of law under articles 52(2) and 52(3) of the EPC. If, on the other hand, a claim is directed to an apparatus (or a process utilizing an apparatus) used to carry out a business method, it will be examined under the same three requirements as any other invention: industrial application, novelty, and inventive step. In order to satisfy the inventive step requirement, however, some aspect of the claimed invention must solve an "objective technical problem," which is the equivalent of making a "technical contribution" to a "technical" field (hereinafter, this requirement will be referred to as the "technical contribution" requirement).⁹⁹ Finally, since the field of economy is not considered a technical field, the inventiveness of the business method itself cannot contribute to the invention's inventive step.

E. The Treatment of Business Method Patents in the National Courts

As noted above, while the patent laws of each contracting state conform to the EPC, infringement actions are handled by the national courts.¹⁰⁰ Significantly, this means that decisions from neither the EPO Board of Appeal nor the Enlarged Board of Appeal are binding on the national courts.¹⁰¹ As a result, national patent law can differ from EPO law (and from the law in other EPC countries) in areas where the EPC is unclear or ambiguous, and the law relating to the patentability of business methods has proven to be one of those areas.

At one end of the spectrum, the United Kingdom has chosen to take a more restrictive approach to business method patents.¹⁰² In particular, English courts have declined to follow the EPO's decision to treat business methods that are implemented through an apparatus as per se patentable subject matter, and they limit their inquiry of inventive step to the invention's overall purpose.¹⁰³ As a result, the fact that a component of a computer-implemented business method makes a technical contribution will not make the invention patentable if the end result of the invention is a method of doing business.¹⁰⁴ As a result, nearly all business methods appear to be unpatentable under the current state of the law in the

98. See, e.g., Patentability of Computer Programs, *supra* note 41, at 29-30.

99. Several cases of the EPO Board of Appeal refer to the "technical contribution" requirement, and the president of the EPO stated that it can be considered synonymous with solving an "objective technical problem." See Appendix 6, *supra* note 65, at 6.

100. See *supra* note 48 and accompanying text.

101. In practice, however, national courts have consistently followed decisions of the Enlarged Board of Appeal, but the Enlarged Board has not yet ruled on the requirements for patentability of business methods or computer-implemented inventions. See Beresford, *supra* note 49, at 53-54, 62.

102. See Likhovski, *supra* note 30, at 269-70 (discussing the United Kingdom's more restrictive interpretation of the EPC with regard to business method patents).

103. See *id.*; see also Merrill Lynch Inc.'s Application, [1988] R.P.C. 1, 9-14 (Patent Ct. 1989) (applying a strict interpretation of article 52(2)'s business method exception to invalidate claim for a computer-implemented method for buying and selling stocks).

104. See Likhovski, *supra* note 30, at 269-70.

United Kingdom.¹⁰⁵

At the other end of the spectrum, German courts have strayed from EPO precedent by allowing claims for computer-implemented business methods in which the inventiveness lies in the business method itself.¹⁰⁶ The crucial point to glean from this comparison of national case law is that there is significant legal uncertainty regarding the patentability of business methods among EPC countries, which is contrary to the original goals of the EPC. Therefore, many commentators argue that this is an opportune time to propose EU legislation to resolve this uncertainty.¹⁰⁷

III. THE FUTURE OF BUSINESS METHOD PATENTS IN EUROPE

In its present state, the law regarding the patentability of business methods under the EPC leaves much to be desired. There is considerable confusion regarding the scope of article 52(2)'s exclusion of business methods as patentable subject matter, and national courts and the EPO have failed to interpret the exclusion uniformly.¹⁰⁸ This confusion has probably been exacerbated the most by the elusive technical contribution requirement.¹⁰⁹ This Part will explore some of the possible developments that could occur in Europe in order to resolve the ambiguity in the law in this area.

A. Follow the United States?

One possibility for harmonization of European patent law would be to simply drop the EPC's business method exception altogether and treat business method claims in the same way as other claims involving patentable subject matter. This is essentially what the United States has done. This Part will briefly outline the United States' approach to business method patents and will consider its advantages and disadvantages as compared to the current approach by the EPO.

105. *See id.*

106. *See* Paul J. Berman & Sinan Utku, *Trends: EC Software Proposal's Impact*, PAT. STRATEGY & MGMT., at 1 (Apr. 2002) ("[I]n the United Kingdom, a computer program-related invention that is merely a method for doing business may not be patentable, even if a technical contribution is made. In Germany, on the other hand, a computer-implemented business method that has a technical aspect may be patented, even though the contribution the invention makes is nontechnical.") (internal footnotes omitted). However, Germany may now be more in line with the EPO, as it recently declared that the correct criteria for patentability in this area is that which is endorsed by the EPO Board of Appeal. *See* Commission Proposal for a Directive of the European Parliament and of the Council on the Patentability of Computer Implemented Inventions, EURO. PARL. DOC. (COM 92 final) (2002), at 10, available at http://europa.eu.int/comm/internal_market/en/indprop/coin02-92en.pdf (last visited Jan. 23, 2004) [hereinafter Proposal].

107. Proposal, *supra* note 106, at 9-10.

108. *See supra* Parts II.D-E.

109. *See* Patentability of Computer Programs, *supra* note 41, at 30-31 (noting that the technical contribution requirement is inherently difficult to interpret and that it is unclear how many business method patents will be permitted under the requirement).

1. Patentability of Business Methods in the United States

The United States has historically fostered a very broad definition of patentable subject matter, illustrated by the much-referenced Supreme Court quote that “anything under the sun that is made by man” is patentable.¹¹⁰ More specifically, federal law defines patentable subject matter as any “new and useful process, machine, manufacture, or composition of matter.”¹¹¹ This definition has been interpreted very broadly; it excludes only “laws of nature, physical phenomena, and abstract ideas.”¹¹²

Until fairly recently, business methods were excluded from patentable subject matter in the United States, apparently under the theory that they are encompassed by the definition of “abstract idea.”¹¹³ This implicit business method exception to patentable subject matter began to erode, however, and in 1998 the *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* decision did away with it entirely.¹¹⁴ While the decision concerned a computer-implemented business method, the language of the opinion makes it clear that the fact that the business method was implemented through a computer was in no way dispositive in concluding that the invention was patentable.¹¹⁵ Rather, the court emphasized that the subject matter inquiry should center on whether the invention has “practical utility.”¹¹⁶ The fact that an invention “produces a ‘useful, concrete, and tangible result.’ . . . renders it statutory subject matter, even if the useful result is expressed in numbers, such as price, profit, percentage, cost, or loss.”¹¹⁷ This broad acceptance of business method patents was underscored a year later by *AT&T Corp. v. Excel Communications, Inc.*, which held that “the scope of [patentable subject matter is] the same regardless of the form—machine or process—in which a particular claim is drafted.”¹¹⁸

In sum, business methods are patentable in the United States as long as they produce some useful result. The effect of this is essentially to treat business method

110. *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) (quoting S. REP. NO. 82-1979, at 5 (1952); H.R. REP. NO. 82-1923, at 6 (1952)).

111. 35 U.S.C. § 101 (2000).

112. *Diamond*, 447 U.S. at 309.

113. See *Hotel Sec. Checking Co. v. Lorraine Co.*, 160 F. 467, 469 (2d Cir. 1908) (holding that a business method is better characterized as a pure concept than as an art and is therefore unpatentable).

114. 149 F.3d 1368, 1375 (Fed. Cir. 1998) (“We take this opportunity to lay [the] ill-conceived [business method] exception to rest.”).

115. See Dreyfuss, *supra* note 6, at 267 (“[I]t is important to note that *State Street* apparently makes patentable all business methods: although the case itself was about a computer-implemented business method, the language of the opinion is extremely broad.”).

116. See *State St. Bank & Trust Co.*, 149 F.3d at 1375. Note also that the invention at issue in *State Street* made no contribution to the field of computer programming or to any other field that might be considered “technical” under European patent law. See *infra* Part III.B. Rather, the basis for patentability was found in the inventiveness of the business method itself, in this case a system used to manage mutual fund assets. See *State St. Bank & Trust Co.*, 149 F.3d at 1374. As one commentator observed, “The same functions could be performed, albeit less efficiently, by an accountant armed with a pencil, paper, calculator, and a filing system.” Thomas, *supra* note 58, at 1157.

117. *State St. Bank & Trust Co.*, 149 F.3d at 1375 (quoting *In re Alappat*, 33 F.3d 1526, 1544 (Fed. Cir. 1994)).

118. 172 F.3d 1352, 1357 (Fed. Cir. 1999).

patents as per se patentable subject matter—whether claimed independently or as a computer implementation—and to reserve the real inquiry of patentability to the other requirements, namely novelty and nonobviousness.¹¹⁹

2. Analysis of the United States' Approach

The United States' broad definition of patentable subject matter has been subject to a great deal of scrutiny in Europe.¹²⁰ The lenient and little-enforced requirement that an invention produce a useful result has resulted in the USPTO granting patents for not only business methods, but also for more questionable "inventions," such as a method for swallowing a pill,¹²¹ a method for putting a golf ball,¹²² and a method for lifting a box.¹²³ Such patents are an easy target for criticism and have led many European commentators to conclude that United States patent law has strayed from "the basic objectives of the patent system."¹²⁴

Given this high level of skepticism of the United States patent system that currently exists in Europe, it is not surprising that the prospect of granting business method patents has been seen simply as "yet another example of unwanted 'Americanization.'"¹²⁵ As was illustrated in Part II of this Note, however, it is not at all clear that business method patents are in fact unworthy of patent protection. Nevertheless, whether Europe ultimately decides to allow business method patents to some degree or to prohibit them altogether, it seems clear that it will never adopt a definition of patentable subject matter as broad as that adopted by the United States.

B. The Commission Proposal for a Directive of the European Parliament and of the Council on the Patentability of Computer Implemented Inventions

Another, more likely course of action that Europe may take in order to harmonize national patent laws regarding business method patents would be to adopt the Proposal.¹²⁶ This Part will summarize the substance of the Proposal and will consider whether it would be prudent for Europe to adopt it.

119. These requirements are codified at 35 U.S.C. §§ 101, 103 (2000). They parallel the EPC's requirements for novelty and nonobviousness (inventive step). See European Patent Convention, *supra* notes 53-54 and accompanying text.

120. See, e.g., Patentability of Computer Programs, *supra* note 41, at 22 ("If really 'anything under the sun made by man' would be eligible for patent, as long as it leads to something 'concrete, useful and tangible', the patent system would be opened to areas of human activity traditionally considered way beyond the realm of the patent system.")

121. U.S. Patent No. 3,418,999 (issued Dec. 31, 1968), <http://www.uspto.gov/patft/index.html> (last visited Jan. 23, 2004).

122. U.S. Patent No. 5,616,089 (issued Apr. 1, 1997), <http://www.uspto.gov/patft/index.html> (last visited Jan. 23, 2004). A later patent was issued for a method of putting using a longer putter. U.S. Patent No. 6,296,577 (issued Oct. 2, 2001), <http://www.uspto.gov/patft/index.html> (last visited Jan. 23, 2004).

123. U.S. Patent No. 5,498,162 (issued Mar. 12, 1996), <http://www.uspto.gov/patft/index.html> (last visited Jan. 23, 2004).

124. See Patentability of Computer Programs, *supra* note 41, at 22.

125. See *id.* at 21.

126. Proposal, *supra* note 106, at 3.

1. Overview of the Proposal

The Proposal was recently developed (February 20, 2002) by the Commission of the European Communities (hereinafter Commission) as a response to the concern that there is a divergence of law between EPC countries regarding the patentability of computer-implemented inventions.¹²⁷ Specifically, the Commission stated that such a directive is necessary because, as the law currently stands, “a computer-implemented invention may be protected in one Member State but not in another one, which has direct and negative effects on the proper functioning of the internal market.”¹²⁸ The Proposal also directly applies to the patentability of business methods in general, since the only business methods that are currently patentable in Europe are those that are computer-implemented.¹²⁹

The Proposal does not seek to make any major substantive changes to the law regarding patentability under the EPC.¹³⁰ Rather, its primary goal is to codify the requirement that computer-implemented inventions make a technical contribution, which is currently only an implicit requirement that has been imputed into the EPC by the EPO Board of Appeal.¹³¹ The Proposal defines “technical contribution” as “a contribution to the state of the art in a technical field which is not obvious to a person skilled in the art.”¹³² The Proposal declines, however, to define “technical” or to specify which fields are to be considered “technical.”¹³³

The Proposal also explains that “the presence of a ‘technical contribution’ is to be assessed . . . under inventive step.”¹³⁴ Specifically, the Proposal provides that a technical contribution can be found in “[1] the problem underlying, and solved by, the claimed invention; [2] the means, that is the technical features, constituting the solution of the underlying problem; [3] the effects achieved in the solution of the underlying problem; [4] the need for technical considerations to arrive at the computer implemented invention as claimed.”¹³⁵

The Proposal’s technical contribution standard is largely equivalent to the standard that can be gleaned from recent EPO case law and to the standard outlined

127. *See id.* at 2-3.

128. *Id.*

129. *See supra* Parts II.D-E. Business methods implemented through some other apparatus are also patentable, but they are subject to the same rules as computer-implemented inventions. *See id.*

130. *See Proposal, supra* note 106, at 11.

131. *Id.* at 10-11.

132. *Id.* at 13.

133. Commission Proposal for a Directive on the Patentability of Computer-Implemented Inventions—Frequently Asked Questions, at http://europa.eu.int/comm/internal_market/en/indprop/comp/02-32.htm (last visited Jan. 23, 2004). Specifically, the Commission stated:

It would not be possible for a legal text such as a Directive to attempt to spell out in fine detail what is meant by “technical”, because the very nature of the patent system is to protect what is novel, and therefore not previously known. In practice the courts will determine in individual cases what is or is not encompassed within the definition.

Id.

134. Proposal, *supra* note 106, at 13.

135. *Id.* at 15.

by the president of EPO.¹³⁶ All approaches assume that computer-implemented inventions possess the requisite “technical” character and are therefore not business methods or computer programs “as such.” The relevant inquiry, under all approaches, is under the inventive step requirement. In order to satisfy inventive step, a computer-implemented invention must make a technical contribution to an art.¹³⁷ It should be emphasized that the Proposal also follows EPO case law and the approach outlined by the EPO president in that it recognizes that the technical contribution requirement can be satisfied if the claimed invention merely involved “technical considerations” to develop the invention, which means that an otherwise unpatentable invention, such as a business method, becomes patentable if at least one component of the invention makes a technical contribution to an art.¹³⁸

The Proposal does diverge from the EPO’s current approach, however, in one key aspect: the Proposal does not permit claims for “computer program products,” which can be distinguished from the apparatus used to execute the program.¹³⁹ In other words, a CD-ROM or similar data-storage device encoded with a program is considered by the proposal to be a computer program “as such” and therefore unpatentable, even if the same program would be patentable if it were claimed in connection with a computer or other apparatus to execute the program.¹⁴⁰ This differs from the EPO’s current approach, which permits the patenting of computer program products, without a direct connection to the computer used to execute it, as long as they can bring about “a technical effect which goes beyond the ‘normal’ physical interactions between the program (software) and the computer (hardware) on which it is run.”¹⁴¹

The most significant implication of the Proposal’s exclusion of computer program products from patentability is that it will make it much more difficult for patent holders to prove infringement for computer-implemented inventions.¹⁴² Since the patent covers only the apparatus used to carry out a computer-implemented invention, manufacturers, retailers, and end-users will be able to use and distribute the software (the substantive invention) without fear of direct patent infringement.¹⁴³

To summarize, if the Proposal is adopted its primary effect will be to cement the technical contribution requirement for computer-implemented inventions—which encompasses business method patents—into European patent law. Moreover, a patent will only be granted for computer-implemented inventions that are claimed in connection with the apparatus used to carry out the invention; computer program products themselves are per se unpatentable.

136. See *supra* Parts II.D-E.

137. See *id.*; Proposal, *supra* note 106, at 13.

138. See *id.*

139. See *id.*

140. See Patentability of Computer Programs, *supra* note 41, at 31.

141. See IBM/Computer Programs, Case T 1173/97, [2000] E.P.O.R. 219, 234 (EPO Technical Bd. App. 1998), <http://legal.european-patent-office.org/dg3/pdf/t971173ex1.pdf> (last visited Jan. 23, 2004).

142. See Patentability of Computer Programs, *supra* note 41, at 31.

143. *Id.*

2. Analysis of the Approach Adopted by the Proposal

Whether the Proposal will actually have the desired effect of harmonizing the law among the EPC countries with regard to patents for computer implemented inventions is very questionable, given the lack of clarification as to what is considered “technical” for purposes of making a technical contribution to an art.¹⁴⁴ Moreover, the Proposal seems to call for codification of the technical contribution requirement without offering any substantial justification for imposing such a requirement.¹⁴⁵ Indeed, the only basis for such a requirement seems to be the fact that some form of “technicality” requirement has always been a part of European patent law.¹⁴⁶

A comparison of two cases decided by the EPO Board of Appeal demonstrates that the technical contribution requirement can potentially give rise to conflicting outcomes. In the *IBM/Method for Interactive Rotation of Displayed Graphic Objects* decision, a patent was granted for a computer-implemented invention that displays graphical objects on a computer monitor in an interactive format.¹⁴⁷ The Board held that the invention made a technical contribution because it allowed users to rotate the graphical objects in a more precise manner than prior systems.¹⁴⁸

In the other decision, *Siemens/Character Form*, the Board held that a computer-implemented invention used to instantaneously convert characters to Arabic and display them on a computer monitor was not sufficiently technical to satisfy the inventive step requirement, even though the program converted characters more quickly and displayed them in a more readable format than prior systems.¹⁴⁹ The Board reasoned that the claimed invention “merely showed the skilled person how to construct and program a computer” so that characters can be converted and displayed in Arabic in the manner described.¹⁵⁰

So why was the invention for displaying graphical objects considered technical while the invention for displaying Arabic characters was not considered technical? Surely, the true inventiveness of each program lied in the fact that users could perform certain tasks more efficiently. Moreover, each invention achieved its intended result through creative computer programming. The only apparent justification is that the claim for the invention used to display graphical objects included an explanation of how the actual program code differed from that of prior programs (which has no bearing on the overall utility of the invention),¹⁵¹ whereas

144. *See id.* at 30-31.

145. *See id.* at 30.

146. *See id.* at 5, 30.

147. *See* Case T 0059/93, 5 (EPO Technical Bd. App. 1994), <http://legal.european-patent-office.org/dg3/pdf/t930059eu1.pdf> (last visited Jan. 23, 2004).

148. *Id.* at 5. The objective technical problem solved was specifically phrased as “how to effect adaptable control of the accuracy of a rotation value to be entered into the system by way of a cursor means used for selecting the object to be rotated, regardless of its size.” *Id.*

149. Case T 158/88, [1992] E.P.O.R. 69, 72-73 (EPO Technical Bd. App. 1989), <http://legal.european-patent-office.org/dg3/biblio/+880158ep1.htm> (last visited Oct 22, 2003).

150. *See id.* at 71.

151. *See IBM/Method for Interactive Rotation of Displayed Graphic Objects*, Case T 0059/93, 5, <http://legal.european-patent-office.org/dg3/pdf/t930059eu1.pdf> (last visited Jan 23, 2004). Specifically, the court agreed with the following statement made in the claim:

the claim for the invention used to display Arabic characters described only the output of the program (which was the source of the invention's utility).¹⁵²

Two conclusions can be drawn from the above comparison. First, there is clearly room for disagreement as to the requisite technicality a computer-implemented invention must have in order to surpass the technical contribution requirement, which means that codifying the technical contribution requirement would not eliminate the possibility of divergence in national patent laws under the EPC.¹⁵³ Second, the criteria used to differentiate technical computer programs from non-technical computer programs seem arbitrary, as they are disconnected from the programs' ultimate utility and inventiveness.¹⁵⁴ Whether such a requirement actually furthers the goals of patent law, therefore, is highly doubtful. In conclusion, without actual, reliable economic justification, adopting the Proposal—and thus codifying the technical contribution requirement—would probably be unwise.

C. An Alternative Course of Action

As illustrated in the above discussion, there are considerable weaknesses in both the United States' broad acceptance of business method patents and in the Proposal's elusive technical contribution requirement. This Part proposes an alternative course of action available to Europe that falls somewhere in between the approach adopted in the United States and the approach suggested by the Proposal.

The proposed alternative can be summed up as follows. First, business methods claimed alone (without a means to carry them out) would remain per se unpatentable, but business methods claimed in conjunction with an apparatus used to carry out the method would be considered patentable subject matter and subject to the same requirements as other patentable inventions, namely novelty, inventive step (nonobviousness), and industrial application.¹⁵⁵ Second, and most important, the inventiveness of the business method itself would be permitted to contribute to inventive step.

The first component of this approach is fully compatible with the EPC, and it

The effects of this method are of a technical nature in that

- the accuracy of rotation of the object does not depend upon the size of the object but only on the length of the "newline" from the object centre to the cursor, [and]
- the system correctly responds to any movement, on whatever curve, of the cursor to its new position on the "newline", the user being allowed to choose the area, e.g. a blank area, where to move the cursor . . .

Id. at 5.

152. *See Siemens/Character Form*, Case T 158/88, [1992] E.P.O.R. at 70.

153. A recent report from a study commissioned by the European Parliament reached a similar conclusion: "In our opinion the 'technical contribution' requirement as laid down in the proposed directive may actually fail to improve legal certainty." Patentability of Computer Programs, *supra* note 41, at 31.

154. *See id.* at 6 ("Is there really a relevant difference between the display of graphical objects and the display of special characters? . . . The delimitation between patentable and non-patentable inventions as shown by these decisions seems rather arbitrary."). It also seems likely that the patentability of many computer-implemented inventions will depend primarily on how the claim is drafted. *See infra* note 162 and accompanying text.

155. European Patent Convention, *supra* notes 52-54.

differs from EPO case law only in that it declines to explicitly require a technical contribution to satisfy the inventive step requirement. The technical character requirement that has been firmly engrained into the EPC would remain intact, as would the interpretation of this requirement that has been employed by the EPO Board of Appeal and endorsed by the EPO president, which maintains that inventions implemented through a computer or other concrete apparatus have a technical character.¹⁵⁶ Finally, the EPC's business method exception could also be retained, as it has been settled that business methods implemented through an apparatus are not business methods "as such."

The second component of this approach—that business methods themselves would be able to contribute to inventive step—is much more ambitious, although it still does not directly contradict the text of the EPC. It does, however, contradict the technical contribution requirement that has emerged from EPO case law, because business methods contribute only to the "field of economy," a field which, according to the EPO Board of Appeal, is not sufficiently "technical."¹⁵⁷

Forgoing the technical contribution requirement in favor of the approach suggested here can be easily justified. As mentioned above, the technical contribution requirement is inherently flawed because the definition of "technical" is ambiguous and difficult, if not impossible, to apply uniformly and because it creates a standard for patentability that is completely disconnected from the invention's overall purpose and utility.¹⁵⁸ Under that system, a completely useless, unimaginative business method can be patented simply because some aspect of it involved "technical considerations," but a remarkably innovative and useful business method that did not involve such considerations cannot be patented.¹⁵⁹ To patent only those business methods that satisfy such an arbitrary formality is simply elevating form over substance.¹⁶⁰

Moreover, even if business method patents are presumed to be detrimental to the economy and even if their prevention is seen as good social policy,¹⁶¹ the technical contribution requirement is a very poor means with which to enforce that policy. In fact, many commentators have suggested that the question of whether a computer-implemented business method patent will surpass the technical contribution requirement will hinge merely on how the claim was drafted,¹⁶² and

156. See *supra* Parts II.D-E.

157. See *Pension Benefits*, Case T 0931/95, [2002] E.P.O.R. 52 at 532 (EPO Technical Bd. App. 2000), <http://legal.european-patent-office.org/dg3/pdf/t950931eu1.pdf> (last visited Jan. 23, 2004).

158. See *supra* Part III.B.

159. See *supra* Parts II.C-D.

160. The United Kingdom has declined to adopt the technical contribution requirement primarily for this reason. See *Merrill Lynch Inc.'s Application*, [1988] R.P.C. 1, 12 (Patent Ct. 1989); see also *Likhovski*, *supra* note 30, at 270 ("In the United Kingdom the law looks at the specific use of the system claimed. In the EPO, the end-use is immaterial. In the United Kingdom a finding of technical effect is not conclusive of subject-matter patentability. In the EPO it is.")

161. The approach proposed here, of course, presumes that business methods, at least in some contexts, do deserve patent protection, primarily for the reasons outlined in Part II of this Note.

162. See *Patentability of Computer Programs*, *supra* note 41, at 23 ("[I]f business method claims are drafted in such a way as to include a 'technical effect', such inventions may indeed qualify for patents."). See generally, *Beresford*, *supra* note 49, at 43 (explaining

some have even suggested that “the protection for ‘e-commerce’ [business method] patents is just as powerful in Europe as it is in the United States, and in some cases even stronger.”¹⁶³ By contrast, the approach suggested here will create a bright line rule for business method patents, thereby reducing the potential for diverging interpretations of the law between EPC countries.

A criticism that will surely be raised to this suggested approach is that it also simply puts form over substance, which, to an extent, it clearly does. There is no doubt that the true invention in any business method patent will lie in the method itself; implementing the method through a computer or some other apparatus could be little more than an afterthought. Of course, the EPO’s current approach to business method patents elevates form over substance through both the technical character requirement and the technical contribution requirement. Hence, one could simply favor this approach as the lesser of two evils, so to speak. Putting form over substance can be justified even further in this context, however, for at least four reasons.

First, as a practical matter, any proposal that supports modifying EPC law to allow business methods themselves to be patented will doubtlessly be rejected, given the EPC’s explicit exclusion of business method patents and its implicit but well-established technical character requirement. Second, as a theoretical matter, requiring a physical implementation will help lay to rest concerns about allowing patents for abstract ideas.

Third, requiring a physical implementation will serve to reduce the pool of potentially patentable business methods. As was illustrated in Part II, the question of whether business method patents are in fact beneficial to society (or at least have the potential to be beneficial) has not yet been resolved. Therefore, it seems logical that the patenting of business methods should be limited in some way. Moreover, limiting the amount of patentable business methods will also help to ease the burden on the EPO and the national patent offices, which will face the daunting task of examining a number of new claims involving new considerations.¹⁶⁴ While in an ideal world these limits would be defined based solely on economic merits, the current lack of empirical data regarding the propriety of business method patents means that a more rudimentary solution must suffice for the time being.

Finally, requiring physical implementation will effectively shut the door on many of the most objectionable business method patents that have been (or could be) granted in the United States, while allowing patents for those business methods that likely need patent protection the most, namely Internet business method patents. Most of the United States patents that have been scorned and ridiculed, such as those for accurately measuring out spices for food,¹⁶⁵ for lifting a box,¹⁶⁶ or for putting a golf ball,¹⁶⁷ would clearly be unpatentable under this system since

how United States’ patent attorneys can draft claims for business method patents in order to “meet the requirements for patentability in the European Patent Office”).

163. Patentability of Computer Programs, *supra* note 41, at 33 (citing Johannes Lang, *Europe Grants E-Commerce Patents Too*, 97 *MANAGING INTELL. PROP.* 13-15 (March 2000)).

164. For a discussion of how this problem has affected the United States, see *supra* notes 13-18 and accompanying text.

165. See *supra* note 12 and accompanying text.

166. See *supra* note 123 and accompanying text.

167. See *supra* note 122 and accompanying text.

they are not carried out by a computer or other apparatus. On the other hand, all business methods implemented online would clearly be patentable, since they are by definition computer-implemented.

CONCLUSION

The evolution of business method patents in Europe is currently at a crossroads. While it seems likely that any future legislation in that area will support the restriction or abolishment of business method patents, the policymakers would be wise to focus their attention on rationales rather than public opinion. There is no sound evidence that business methods are so unique as to warrant wholesale exclusion from patentability, and there is reason to believe that innovation in the Internet business sector will be seriously hindered without the protection of such patents. In light of these basic conclusions, allowing business method patents, at least in some carefully tailored manner, seems justified. This Note offers one attempt at a sensible approach to business method patents. Although it is by no means a perfect solution, it at least illustrates that there are alternatives to following the United States or prohibiting business method patents entirely; and if more commentators would recognize this and concentrate their efforts on finding a prudent, policy-based compromise to business method patents, it would surely be a step in the right direction.

