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Lessons from Bilski

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INTRODUCTION

Although patent law is often broadly interpreted, in *Harvard College v. Canada (Commissioner of Patents)* (2002), the Supreme Court of Canada explicitly stated that not "anything under the sun that is made by man" is patentable.[1] In Canada, for an invention to be considered patentable subject matter, it must fall under one of the statutory categories set out in s. 2 of the *Patent Act*.[2]

Patent applications in the industrial age primarily described inventions which were tangible in form.[3] This made it easier to identify which statutory category the invention fell under. As society moved from the industrial age to the information age, significant advancements in computer technology brought new challenges for patent law. Inventions of the information age, including e-commerce and software, often lack physical structure or are intangible in form.[4] Existing legal principles assumed tangibility for inventions hence determining the patentability of inventions in the information age became difficult.[5]

Prior to the information age, it was generally accepted that business methods were not patentable. The question of whether business methods are patentable subject matter became intertwined with the patentability of computer-related inventions because, as technology advanced, many business methods became automated and were implemented by software.[6] Both software and business methods are intangible in form other than that they may need general computers to carry out their functions. In this paper, I will use the term "intangible invention" to refer to both business methods and software inventions.

In the 1990's, it became much easier to patent software and business methods

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1 *Harvard College v. Canada (Commissioner of Patents)*, 2002 SCC 76 at para. 39, [2002] 4 SCR 45.

2 *Patent Act*, R.S.C. 1985, c. P-4, s. 2 [*Patent Act*].

3 Stephen Korniczky, Amy Simpson & Ryan Hawkins, "The New Landscape of Patentable Subject Matter Under 35 U.S.C. §101 — Applying an Industrial Age Test to Information Age Innovations", *Intellectual Property Today* (January 2009) online: Intellectual Property Today <http://www.iptoday.com/articles/2009-1-kornickzy.asp>.

4 Maayan Filmar, "A Critique of In Re Bilski" (2009) 20 DePaul J. Art Tech. & Intell. Prop. L. 11 at 11-12.

5 Benjamin W Hattenbach & Kenneth J Weatherwax, "Bilski v. Kappos: A Divided Court Narrowly Reaffirms Patentability of Business Methods" (2010) 22:9 Intellectual Property & Technology Law Journal 15at 15.

6 Teresa Scassa & Michael Deturbide, *Electronic Commerce and Internet Law in Canada*, (Toronto: CCH, 2004) at 383.

in the U.S. following a trilogy of cases from the Court of Appeal for the Federal Circuit.[7] These cases defined a new test for determining the patentability of an invention, which interpreted the patentability requirement much more broadly than courts had previously done by eliminating the requirement that a patentable invention should have ties to some physical component.[8] Moreover, within these decisions the court clarified that a business method is patentable subject matter.[9] These cases will be discussed in more detail in section 2 of this paper.

Following the trilogy, patent applications for intangible inventions significantly increased at the United States Patent and Trademark Office (USPTO).[10] According to a study, more than one third (i.e. approximately 2.5 million) of all patents issued in the U.S were issued within the last twenty years and the majority of these patents came from the Information Technology (IT) and Biotech industries.[11] The World Intellectual Property Organization's (WIPO) statistical report from 2008 confirms that most patent applications came from the computer technology industry between 2001 and 2005.[12] As intangible invention patents and patent litigation increased in frequency, concerns arose in the patent industry that bad patents were being issued and that the quality of the patent system was declining.[13] There was also a concern that a troublesome behaviour known as "patent trolling" was emerging within the IT industry: a rent-seeking practice in which owners of patent portfolios generate profit through the obstruction of innovation rather than pursuing the promotion of the growth of "science and useful arts".[14]

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7 *In re Alappat*, 33 F.3d 1526, 31 U.S.P.Q.2d (BNA) 1545 (Fed. Cir. 1994) [*In re Alappat* cited to F]; *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 149 F.3d 1368, 47 U.S.P.Q.2d (BNA) 1596 (Fed. Cir. 1998) [*State Street* cited to F]; *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 50 U.S.P.Q.2d 1447 (Fed. Cir. 1999) [*AT&T Corp.* cited to F]; Michael Guntersdorfer, "The Death of State Street" (2009) 9 Wake Forest Intell. Prop. L.J. 61 at 67-68.

8 Korniczky, Simpson & Hawkins, *supra*, note 3.

9 Scott M Alter, "*In re Bilski*: The Case of a Strange Statute or How the Federal Circuit Learned to Stop Worrying and Love the Supreme Court", The Computer & Internet Lawyer 26:2 (February 2009) 1 at 6.

10 Filmar, *supra* note 4 at 32.

11 Mark A Lemley, "Ignoring Patents" (2008) 2008 Mich. St. L. Rev. 19 at 19.

12 World Intellectual Property Organization, *World Patent Report — A Statistical Review, 2008* (2008) at 8, 41, online: World Intellectual Property Organization <http://www.wipo.int/export/sites/www/ipstats/en/statistics/patents/pdf/wipo_pub_931.pdf>; Filmar, *supra* note 4 at 12.

13 Pam Fulmer, Ilham Hosseini & Laurie Charrington, "How Software Developers Can Protect Their Rights in the Aftermath of *In re Bilski*" The Computer & Internet Lawyer 27:6 (June 2010) 4 at 6.

14 Patent trolls are companies that make money by buying up ambiguous and broad patents and use them to collect excessive licensing fees from potential patent infringers. This places potential infringers in a difficult situation because a patent troll can shut down their business and it can cost millions of dollars to defend themselves in court. Patent trolls do not produce nor commercialize the patented inventions for the public. Thus, the patent trolling behaviour stifles innovation by driving out some producers of patented technology from the market and driving up the production cost for those who

These events gave the U.S. courts a motivation to limit the patentability of intangible inventions and this discussion culminated in *Bilski v. Kappos* (2010) (hereinafter *Bilski/SCOTUS*),[15] where the Supreme Court of the United States (SCOTUS) attempted to clear up the law on the patentability of process claims. Around the same time, the Federal Court of Canada had an opportunity to examine the patentability of process claims in *Amazon.com Inc. v. Canada* (2010) (hereinafter *Amazon/FCC*).[16]

In this paper, I will examine how the U.S. and Canadian courts have approached the patentability of intangible inventions and discuss whether any lessons can be learned from the U.S.'s patent dilemma. In section 2, I will review the American jurisprudence on patentability of intangible inventions. In section 3, I will discuss the potential impact *Bilski* may have on the American jurisprudence. Section 4 will assess the Canadian jurisprudence on patentability of intangible inventions. In section 5, I will discuss the Federal Court of Canada's decision in *Amazon/FCC*. I argue that based on recent events in the American jurisprudence, Canadian courts should carefully consider the consequences of opening up patent protection to intangible inventions because granting too much patent protection can impede innovation and endanger the patent system.

I. AMERICAN JURISPRUDENCE

In the U.S., Congress received its power to legislate with respect to patent law from the U.S. Constitution.[17] Article 1, Section 8, Clause 8 of the U.S. Constitution states that:

> The 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.[18]

Therefore, Congress must legislate to "promote the Progress of Science and useful Arts". The American statutory definition of "invention" is in §101 of Title 35 of the United States Code (U.S.C.), which concerns patents and trademarks.[19] §101 states that:

> 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 require-

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stays in the market by paying excessive licensing fees to patent trolls. For more details, please see Christopher A Harkins, "Fending Off Paper Patents and Patent Trolls: A Novel 'Cold Fusion' Defense because Changing Times Demand It" (2007) 17 Alb. L.J. Sci. & Tech. 407.

15 *Bilski v. Kappos*, 130 S.Ct. 3218, 177 L Ed 2d 792 [*Bilski/SCOTUS* cited to S.Ct.].

16 *Amazon.com Inc. v. Canada*, 2010 FC 1011, [2010] 4 F.C.R. 541 [*Amazon/FCC*].

17 Ben Klemens, "The Rise of the Information Processing Patent" (2008) 14 B.U. J. Sci. & Tech. L. 1 at 4.

18 US Const art 1, §8 cl 8.

19 Monplaisir Hamilton, "Reducing the Patent Incentive: Federal Circuit Revisits Patentable Subject Matter in *Ex Parte Bilski*" (2008) 90 J. Pat. & Trademark Off. Soc'y 678 at 678-679.

> ments of this title.[20]

In his concurring opinion in *Bilski/SCOTUS*, Justice Stevens noted that the current §101 is nearly identical to the version in the *Patent Act of 1793*.[21] In 1952, Congress swapped the term "art" for "process" and that is the only statutory change this section has experienced since 1793.[22] When Congress replaced the term "art" with "process", the Congress also added a definition of "process" in §100(b) as follows:

> The term "process" means process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.[23]

American courts have struggled over the years to interpret these sections in order to determine what type of invention would be statutorily eligible.[24] As society moved from the industrial age to the information age, courts wrestled with defining the term "process" under §101 and whether inventions such as business methods and computer software fell under this category of patentable subject matter. The usual starting point of this discussion is *Cochrane v. Deener* (1876).[25] In *Deener*, SCOTUS used the following language to describe a patentable process:

> A process is a mode of treatment of certain materials to produce a given result. It 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; whilst the process itself may be altogether new, and produce an entirely new result. The process requires that certain things should be done with certain substances, and in a certain order; but the tools to be used in doing this may be of secondary consequence.[26]

According to *Deener*, a patentable process must transform or reduce the subject-matter to a different state or thing. A long time passed after *Deener* before SCOTUS considered the patentability of processes in the context of intangible inventions. In *Gottschalk v. Benson* (1972).[27] SCOTUS ruled that a method of programming a general purpose computer to convert binary-coded-decimal numbers into a pure binary form was not patentable. According to the court, "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".[28] Everyone must have access to basic tools in order to contribute to techno-

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20 35 USC §101 (2007).

21 *Bilski/SCOTUS*, *supra* note 15 at 3242.

22 Klemens, *supra* note 17 at 4; *Diamond v. Chakrabarty*, 447 U.S. 303 at 309 (1980); 100 S.Ct. 2204.

23 35 USC §100(b) (2007).

24 Hamilton, *supra* note 19.

25 *Cochrane v. Deener*, 94 U.S. 780 (1876); 24 L. Ed. 139 [*Deener* cited to US].

26 *Ibid* at 788.

27 *Gottschalk v. Benson*, 409 U.S. 63 (1972); 93 S.Ct. 253 [*Benson* cited to US].

28 *Ibid* at 67.

logical advancement and patenting the basic tools would hinder innovation.[29]

In *Benson*, SCOTUS found that the claimed invention was not a patentable process because it was a mathematical algorithm with no practical application except in connection with a digital computer.[30] Granting a patent would "wholly preempt" the claimed mathematical formula.[31] The court defined "algorithm" as "a procedure for solving a given type of mathematical problem" and concluded that algorithms are not patentable subject matters because they are abstract concepts.[32] The court referred to *Deener* and concluded that "Transformation and reduction of an article 'to a different state or thing' is the clue to the patentability of a process claim that does not include particular machines".[33]

SCOTUS extended the propositions found in *Benson* further in *Parker v. Flook* (1978).[34] First, the court confirmed *Benson* and then added the following two principles:

> 1. Attaching insignificant post-solution activity to unpatentable subject matter does not convert it into a patentable process.[35]
>
> 2. Limiting an abstract idea to a particular purpose or use (i.e. field-of-use limitation)[36] does not convert unpatentable subject matter into a patentable one.[37]

Note that in both *Benson* and *Flook*, SCOTUS confirmed the possibility that a process may be patentable even though it did not pass the transformation test articulated in *Deener*.[38]

In *Diamond v. Diehr* (1981) SCOTUS examined whether a process of curing synthetic rubber was patentable under §101.[39] Although both *Flook* and *Diehr*

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29 MJ Edwards & Donald Steinberg, "The Implication of *Bilski*: Patentable Subject matter in the United States" (2009) 49 IDEA 411 at 413.

30 *Supra* note 27 at 71.

31 *Ibid* at 71-72.

32 *Ibid* at 65, 67.

33 *Ibid* at 70.

34 *Parker v. Flook*, 437 U.S. 584 (1978); 98 S.Ct. 2522 [*Flook* cited to US]. The invention at issue in *Flook* was a method of updating alarm limits. The USSC found that the patent application contained a formula to calculate an updated alarm limit in a process comprising the catalytic chemical conversion of hydrocarbons. The calculations were performed by a digital computer. The court determined that a claim for an improved method of calculating alarm limits, even if tied to a specific end use, is a mathematic formula or algorithm and this is unpatentable subject matter under §101; Klemens, *supra* note 17 at 12.

35 *Supra* note 34 at 590.

36 Edwards & Steinberg, *supra* note 29 at 421.

37 *Flook*, *supra* note 34; *Diamond v. Diehr*, 450 U.S. 175 at 191 (1981); 101 S.Ct. 1048 [*Diehr*].

38 *Flook*, *supra* note 34 at 588, n. 9; Alter, *supra* note 9 at 2-3.

39 *Supra* note 37 at 177. Diehr's invention was a rubber curing device. Diehr claimed a process where the temperature inside the rubber mold was constantly measured and fed to a digital computer, which calculated the cure time using a well known algorithm and opened the mold at the proper time. The court distinguished *Diehr* from *Flook* because,

claimed similar inventions that used a mathematical algorithm to calculate some numbers to monitor industrial processes,[40] SCOTUS distinguished *Diehr* from *Benson* and *Flook*. SCOTUS determined that, when the claimed invention is considered as a whole, this invention is a patentable process and not an attempt to patent a mathematical formula.[41] Therefore, the court confirmed that, while pure algorithms are not patentable, an application of a mathematical formula is patentable subject matter.[42] SCOTUS also reaffirmed the principle that neither insignificant post-solution activity nor field-of-use limitation can change unpatentable subject matter into patentable subject matter.[43]

Following the Supreme Court Trilogy (i.e. *Benson, Flook* and *Diehr*), the lower courts[44] developed several different tests for determining patentable process claims based on the general principles in the Supreme Court Trilogy.[45] One of the tests developed by the lower court was the *Freeman-Walter-Abele* test.[46] Briefly stated, the test examines whether a claimed invention uses an algorithm. If so, then the invention is considered patentable if patenting it does not wholly pre-empt the algorithm.

The U.S. Court of Appeal for the Federal Circuit (CAFC) developed the next test known as the "useful, concrete and tangible result" test.[47] Some have noted that this test was responsible for opening the floodgate of software and business method patent applications in the U.S. and allowing abstract concepts to be patented.[48] CAFC began using the "useful, concrete and tangible result" test *In re Alappat* (1994).[49] In this case, the court determined that a general purpose computer loaded with a computer programme is a new machine and it is patentable as a "machine"

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unlike in *Flook* which sought to patent a formula for computing an alarm limit, Diehr's invention only sought to foreclose the use of algorithm from others only in conjunction with all the other steps in the claimed process.

40 Guntersdorfer, *supra* note 7 at 65-66.

41 *Supra* note 37 at 191–193.

42 *Ibid* at 187.

43 Edwards & Steinberg, *supra* note 29 at 416.

44 By "lower court" I am referring to the abolished Court of Customs and Patent Appeals and the Court of Appeal for the Federal Circuit that currently exercises CCPA's jurisdiction. For more details, please refer to Adam B Jaffe & Josh Lerner, *Innovation and Its Discontents: How Our Broken Patent System Is Endangering Innovation and Progress, and What to Do About It* (Princeton, NJ: Princeton University Press, 2004).

45 Michael L Kiklis, "*Bilski v. Kappos*: Back to 1981" *The Computer & Internet Lawyer* 27:10 (October 2010) 1 at 3-4.

46 *In re Freeman*, 573 F.2d 1237, 1978 CCPA LEXIS 307; *In re Walter*, 618 F.2d 758, 1980 CCPA LEXIS 115.

47 Kiklis, *supra* note 45 at 4.

48 *Ibid* at 1; Barry Sookman, *Sookman: Computer, Internet and Electronic Commerce Law*, loose-leaf (Toronto: Carswell, 2000) at 11.

49 *In re Alappat*, 33 F.3d 1526, 1994 U.S. App. LEXIS 21129 [*In re Alappat* cited to F]. The invention at issue in this case was a computer implemented system, a rasterizer, which mathematically transformed data to reduce aliasing in a digital oscilloscope.

under §101.[50] The court reasoned that such an invention is not a disembodied idea but "a specific machine that produces a useful, concrete, and tangible result".[51]

In *State Street Bank & Trust Co. v. Signature Financial Group Inc.* (1998),[52] CAFC cleared up any confusion regarding patentability of business methods by declaring that business methods are indeed patentable under §101.[53] The court specifically rejected the *Freeman-Walter-Abele* test.[54] CAFC found that a claim describing a business method that uses a computer to carry out mathematical calculations is patentable as a "machine" under §101 because "it produces a useful, concrete and tangible result".[55] Therefore, *State Street* removed any lingering doubt about patentability of business methods and after *State Street*, USPTO began to receive a large number of patent applications for software and business methods. In *AT&T Corp. v. Excel Communications, Inc.* (1999).[56] CAFC further clarified that non-machine business method claims are patentable as a "process" under §101.[57] Thus, the "useful, concrete and tangible result" test was used to significantly broaden the scope of §101.[58]

II. RECENT CHANGE IN THE U.S.

Ever since CAFC adopted the "useful, concrete, and tangible result" standard as the test for determining the patentability of an invention, many software and business method claims have received patents in the U.S.[59] Consequently, the U.S. became the country with the greatest number of software patents.[60] However, issuing software patents so freely has created some problems within its Information Technology (IT) industry, such as a patent thicket that can prevent a company from developing a new product and entering the market because of overlapping patent rights, patent trolling behaviour, existence of overbroad and poor quality of patents, a large search cost to identify relevant patents, increased litigation and decreased

50 Klemens, *supra* note 17 at 15-16.

51 *Supra* note 49 at 1544; Hamilton, *supra* note 19 at 680.

52 *Supra* note 7. The invention at issue in this case was a computer implemented data processing system for managing polled mutual fund assets. The claimed invention is software operating on a personal computer, which performs a series of calculations and stores the numbers that represent the final share price on a floppy disk, produces a print out, or displays them on a computer screen.

53 Robert A McFarlane & Robert G Litts, "Business Methods and Patentable Subject Matter Following *In Re Bilski*: Is Anything Under the Sun Made by Man Really Patentable?" (2010) 26:1 Santa Clara Computer & High Tech. L.J. 35 at 45-46.

54 *Ibid* at 43.

55 *Ibid* at 45; Fulmer, Hosseini & Charrington, *supra* note 13 at 6; Hamilton, *supra* note 19 at 681.

56 *Supra* note 7.

57 McFarlane & Litts, *supra* note 53 at 46.

58 Guntersdorfer, *supra* note 7 at 68, 82.

59 Sookman, *supra* note 48.

60 Sherly Elizabeth Abraham, "Software Patents in the United States: A Balanced Approach" (2009) 25 Computer L. & Sec. R. 554 at 554–556.

incentive to invest in research and development.[61]

The primary purpose of patent law is to "promote the Progress of Science and useful Arts".[62] However, granting too many patents for intangible inventions hinder innovation and threatened the vitality of the U.S. patent system.One of the particularly troublesome problems is patent trolling behaviour. A patent troll is an entity that may buy and hold the rights to many patented inventions. It usually "never conceives of, builds, or makes the alleged invention work" itself but instead threatens potential infringers into an extravagant licensing agreement.[63] Some scholars have warned that this behaviour is problematic because it can prevent actual innovation from occurring as companies may give up research and development upon facing a threat from a patent troll.[64] This is especially disconcerting when the validity of so many software and business method patents is questionable.[65] Even SCOTUS has expressed a concern about patent trolling behaviour in *eBay Inc. v. MercExchange, L.L.C.* (2006).[66]

In addition to the patent trolling problem, computer technology tends to develop cumulatively and new companies entering the market may need to acquire many licenses before they can start producing their goods. Such a requirement is unattractive and it can cause people to leave the market or prevent new people from entering the market since without the necessary licensing agreement, a producer can face an infringement lawsuit from any of the patent holders whose patented technology contributed towards the producer's final product. Therefore, too much patent protection can impede growth rather than promote it. In recognizing the problem caused by too many patents, dissenting judges of the *Laboratory Corp. of America Holdings v. Metabolite Laboratories, Inc.* (2006)[67] noted that SCOTUS has never endorsed the "useful, concrete and tangible result" test and cautioned that "too much patent protection can impede rather than 'promote the Progress of Science and useful Arts'".[68]

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61 Harkins, *supra* note 14; James Bessen & Michael J Meurer, *Patent Failure: How Judges, Bureaucrats, and Lawyers put Innovation at Risk* (Woodstock: Princeton University Press, 2008); Lemley, *supra* note 11; James Gleick, "Patently Absurd" *New York Times Magazine* (12 March 2000) online: The New York Times Magazine <http://www.nytimes.com/library/magazine/home/20000312mag-patents.html>; John R Allison, Mark A Lemley & Joshua Walker, "Extreme Value or Trolls on Top? The Characteristic of the Most Litigated Patents" (2009) 158 U. Pa. L. Rev. 1; Mark A Lemley & Carl Shapiro, "Patent Holdup and Royalty Stacking" (2007) 85 Texas L. Rev. 1991; Michele Boldrin & David K Levine, *Against Intellectual Monopoly* (New York: Cambridge University Press, 2008); Bronwyn H Hall & Megan MacGarvie, "The Private Value of Software Patents" (2010) 39 Research Policy 994; Klemens, *supra* note 17.

62 US Const art I, §8, cl 8; Kiklis, *supra* note 45.

63 Harkins *supra*, note 14 at 411.

64 *Ibid* at 412.

65 *Ibid* at 411.

66 547 U.S. 388 at 396-397 (2006); 126 S.Ct. 1837.

67 548 U.S. 124, 124 (2006); 126 S. Ct. 2921 [*Laboratory Corp* cited to US].

68 *Ibid* at 126-127; Guntersdorfer, *supra* note 7 at 73.

These concerns seemed to have motivated CAFC to adopt a new patentability test, known as the "machine-or-transformation" test in *In re Bilski* (2010) (hereinafter *Bilski/CAFC*).[69]

(a) In Re Bilski (CAFC)

Bilski/CAFC was a big shift in law. Prior to *Bilski/CAFC*, some had considered the appellate court for the Federal Circuit as a pro-patent court.[70] On April 10, 1997, Bilski had filed a patent application regarding "a method of hedging risk in the field of commodities trading".[71] The claimed invention described an intermediary with a right to buy and sell commodities at a fixed rate so that commodity providers may hedge or minimize their risk in case of a large price fluctuation. The patent examiner had rejected this application because the claimed invention "is not implemented on a specific apparatus and merely manipulates an abstract idea and solves a purely mathematical problem without any limitation to a practical application, therefore, the invention is not directed to the technological arts."[72] An appeal to the Board of Patent Appeals and Interferences (BPAI) was dismissed based on the finding that the claimed invention did not produce a useful, concrete, and tangible result, thus, it was not patentable.[73]

In an *en banc* decision, CAFC rejected all prior tests and adopted the machine-or-transformation test as the sole test for determining patentability of process claims.[74] The court relied on the Supreme Court Trilogy (*Benson, Flook* and *Diehr*) to conclude that the machine-or-transformation test is "the clue" to assess whether a claimed invention would effectively pre-empt "all use of a fundamental principle".[75]

The machine-or-transformation test, which was first established in *Benson*, is a two pronged test which says that a process claim is patentable if:

1. It is tied to a particular machine or apparatus, or
2. It transforms a particular article into a different state or thing.[76]

CAFC stated that ties to a machine or transformation of an article should "impose meaningful limits on the claim's scope to impart patent-eligibility".[77] The court confirmed that mere insignificant extra-solution activity and field-of-use limitations do not render unpatentable subject matter patentable.[78] The court did not elaborate on the machine part of the test. With respect to the transformation prong

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69 *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008); 88 U.S.P.Q.2d 1385 (Fed. Cir. 2008) [*Bilski/CAFC* cited to F].

70 Jaffe & Lerner, *supra* note 44.

71 *Bilski/CAFC*, *supra* note 69 at 949.

72 *Ibid* at 950.

73 *Ibid.*

74 McFarlane & Litts, *supra* note 53 at 37.

75 *Supra* note 69 at 954.

76 *Ibid* at 961.

77 *Ibid.*

78 *Ibid* at 957, 961-962.

of the test, the court stated that "This transformation must be central to the purpose of the claimed process".[79] Furthermore, the court stated that the transformation must be a "chemical or physical transformation of physical objects or substances" or a transformation of data representing physical objects.[80] One should note that the court did not specify in what instances "data represents a physical object", leaving some room for interpretation under this prong of the test. The court also confirmed that business methods are patentable subject matters under §101.[81] When considered as a whole, the court concluded that Bilski's application failed to satisfy the machine-or-transformation test, therefore, it was not patentable subject matter.

Bilski/CAFC's majority opinion was followed by a concurring opinion and three separate dissenting opinions. Justice Newman in his dissent noted that the majority's position is contrary to statute, precedent and constitutional mandate.[82] He argued not only that the machine-or-transformation test adds uncertainty to patent law but that it is ill-suited for assessing patentability of inventions from the information age. According to Justice Newman, the majority should continue to use the "useful, concrete, and tangible result" test.[83]

In his separate dissent, Justice Rader agreed with Justice Newman that the machine-or-transformation test lacks certainty.[84] He stated that the majority did not have to go any further than to merely reject Bilski's application because it is an abstract idea.

On the other hand, Justice Mayer dissented because he believed that the majority did not go far enough to close the door on business method patents.[85] He would have declared that business methods are excluded subject matter and would have clearly overruled the *Alappat, State Street* and *AT&T* decisions because they are contrary to the congressional intent that not everything under the sun made by man is patentable.[86]

Following *Bilski/CAFC*, those in the patent industry agreed that the machine-or-transformation test would undoubtedly limit the patentability of intangible inventions like software and business methods.[87] However, it was still unclear whether one could avoid the machine-or-transformation test by framing process claims as machine claims because CAFC applied the useful-concrete-tangible test for both machine and process claims.[88] Post-*Bilski/CAFC* cases from BPAI demonstrated that the machine-or-transformation test is difficult to apply consistently.[89]

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79 *Ibid* at 962.

80 *Ibid* at 962-963.

81 *Ibid* at 960.

82 *Ibid* at 976.

83 *Ibid* at 991.

84 *Ibid* at 1015.

85 McFarlane & Litts, *supra* note 53 at 61–63.

86 *Bilski/CAFC*, *supra* note 69 at 1000.

87 Edwards & Steinberg, *supra* note 29 at 425.

88 *Ibid* at 432.

89 Elizabeth Ruzich, "*In re Bilski* and the Future of Business Method and Software Patents" (2009) 50 IDEA 103 at 107–117.

Thus, Justices Newman and Rader may have been correct to point out that using the machine-or-transformation test is inappropriate because the test will inject uncertainty into patent law.

(b) Bilski v. Kappos (SCOTUS)

Bilski appealed CAFC's decision to SCOTUS, which unanimously agreed on the following:

> 1. The text of §101 is broad but not without limits.
>
> 2. The machine-or-transformation test is a useful and important clue and investigative tool for determining the patentability of process claims.
>
> 3. Although the machine-or-transformation test is a useful and important clue, it is not the sole test for determining the patentability of process claims.
>
> 4. The court never endorsed the use of CAFC's "useful, concrete and tangible results" test.[90]
>
> 5. The §101 inquiry is a threshold test and other conditions and requirements under the statute, such as novelty and non-obviousness, must be met before a patent can be granted.[91]

The court also unanimously found that Bilski's method of hedging risk in the field of commodities trading is not patentable subject matter within §101, but the court was closely divided on why it should not be patentable.

The majority opinion written by Justice Kennedy held that Bilski's method was not patentable because it is an abstract concept.[92] In coming to this conclusion, the majority relied on the principle that "laws of nature, physical phenomena, and abstract ideas" are not patentable subject matter under §101 because they are "part of the store house of knowledge of all men . . . free to all men and reserved exclusively to none".[93]

The rule of statutory construction requires the court to interpret words in their "ordinary, contemporary, common meaning" unless specifically defined elsewhere.[94] In this case, the term "process" is defined in §100(b). Therefore, CAFC erred when the court read in the requirement that patentable process be tied to a machine or transform an article.[95] *Cochrane* did use the machine-or-transformation language to define patentable process in 1877, but none of the past SCOTUS decisions has ever stated that the machine-or-transformation test is the sole test for determining the patentability of process claims.[96] The patentability of process claims should be defined by the definition in §100(b) and the principles found in *Benson,*

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90 *Bilski/SCOTUS*, *supra* note 15 at 3258-3259.

91 *Ibid* at 3225, 3236.

92 *Ibid* at 3231.

93 *Ibid* at 3225.

94 *Ibid* at 3226.

95 *Ibid*.

96 *Ibid*.

Flook and *Diehr*.[97]

The majority clarified that a business method is patentable subject matter under §101 and referred to §273(b)(1), a defence of prior use for infringing a business method patent, as evidence that the *Patent Act* does not exclude business method patents.[98] Lastly, the court noted that this decision does not endorse the patentability analysis developed in *State Street* and *AT&T*.[99]

By not accepting the machine-or-transformation test as the sole test, the majority effectively rejected CAFC's attempt to develop a single, bright-line test for §101 and replaced their effort with general principles from SCOTUS's own precedents. Nevertheless, SCOTUS invited CAFC to continue to develop other limiting criteria consistent with the purpose of the *Patent Act*.

The minority opinion written by Justice Stevens held that Bilski's method is not patentable because it is a method of doing business and business methods should be categorically excluded from patentability.[100] Justice Stevens reviewed the historical development of U.S. patent law and concluded that business methods have been historically excluded.[101] He also noted that due to the unique characteristics of business methods, allowing business methods to receive patent protection would stifle innovation and competition.[102]

Justice Stevens found several problems with the majority's opinion. He argued that the majority erred by stating that patent terms should be interpreted in their "ordinary, contemporary, common meaning". Justice Stevens pointed out such statutory interpretation would lead to absurd results.[103] Moreover, §100(b) is not helpful because it uses the term "process" to define "process". According to Justice Stevens, another problem with the majority opinion is that they never explained why Bilski's claimed invention is an attempt to patent an abstract idea.[104] The majority merely stated that it is an abstract idea but did not explain how they got to this conclusion. Finally, Justice Stevens noted that the three judicially created exceptions (i.e. law of nature, physical phenomena, and abstract ideas) do not prevent ridiculous process patents from being patented.[105]

Justice Stevens argued that Congress was not actually ratifying the *State Street* decision by codifying §273(b)(1), but Congress was merely preventing potential fallout.[106] However, the majority was likely correct in that, by codifying this section, Congress did acknowledge that business methods may be patentable within the *Patent Act*. If Congress thought that business method patents would create serious problems in the business community and therefore should not be patentable,

97 *Ibid* at 3231.

98 *Ibid* at 3228.

99 *Ibid* at 3231.

100 *Ibid* at 3232.

101 *Ibid* at 3239.

102 *Ibid* at 3256-3257.

103 *Ibid* at 3234-3235.

104 *Ibid* at 3236.

105 *Ibid* at 3238, n. 5.

106 *Ibid* at 3250.

then Congress could have simply codified that business methods are not patentable instead of codifying a defence for infringing a business method patent.

(c) Discussion

Soon after *Bilski/SCOTUS*, USPTO released a document titled "Interim Guidance for Determining Subject Matter Eligibility for Process Claims in View of *Bilski v. Kappos*" (Interim Guidance).[107] The Interim Guidance instructed patent examiners to continue using the machine-or-transformation test as a starting point of the patentability analysis because SCOTUS endorsed the machine-or-transformation test as an important and useful clue in *Bilski/SCOTUS*. If a claimed invention failed to satisfy the machine-or-transformation requirement, then the patent examiner may reject the application under §101, unless the applicant can clearly demonstrate that his claimed invention is not an abstract idea.[108] The examination process at USPTO confirms that the machine-or-transformation test is still very much relevant in the U.S.

SCOTUS explicitly rejected the "useful, concrete and tangible result" test in *Bilski/SCOTUS*, thereby settling any uncertainty that this test may still be used for determining the patentability of machine claims. By endorsing the machine-or-transformation test instead of the "useful, concrete and tangible result" test, SCOTUS clearly signalled that the scope of §101 should be reduced and the *State Street* should be undone.

Despite protests from some organizations,[109] both CAFC and SCOTUS confirmed that business methods are patentable subject matter. Both courts' refusal to exclude business methods strengthened the position that business methods are indeed patentable and it is unlikely that the patentability of business methods will be questioned any further in the future.

Since SCOTUS did not adopt or create a new bright-line test for determining patentability, critics suggested that *Bilski/SCOTUS* did not advance or stabilize the law.[110] However, both Justice Rader of CAFC and Justice Kennedy of SCOTUS have articulated that it would be unwise not to maintain a flexible approach to the patentability analysis because one must leave room within §101 so that unforeseen future inventions may qualify for patent protection. It would certainly seem advisable that the patentability test should remain flexible rather than rigid given that §101 is written in broad terms that should encompass unforeseen technology. Thus, perhaps the decision to leave the door open for business methods and to not adopt a bright-line test may have been reached in order to leave some room for the unforeseeable future.

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107 US, United States Patent and Trademark Office, *Interim Guidelines for Examination of Patent Applications for Patent Subject MatterEligibility*, (OG Notices: 22 November 2005), online: United States Patent and Trademark Office <http://www.uspto.gov/web/offices/com/sol/og/2005/week47/patgupa.htm>.

108 Hattenbach & Weatherwax, *supra* note 5 at 17.

109 Kiklis, *supra* note 45 at 6.

110 Hattenbach & Weatherwax, *supra* note 5 at 17.

III. CANADIAN JURISPRUDENCE

Section 2 of the *Patent Act of Canada* defines a patentable invention as the following:

> "invention" means any new and useful art, process, machine, manufacture or composition of matter, or any new and useful improvement in any art, process, machine, manufacture or composition of matter.[111]

The statutory definition of "invention" is quite close, almost identical, to the American statutory definition of patentable invention. As in § 101 of the Title 35 U.S.C., s. 2 identifies categories of patentable subject matter: art, process, machine, manufacture, and composition of matter. Like in the U.S., Canadian courts have struggled to define when an intangible invention, such as business methods and software, is considered a patentable art or process under the *Patent Act of Canada*.[112]

Canadian Gypsum Co. v. Gypsum, Lime & Alabastine, Canada Ltd. (1931) (hereinafter *Gypsum)*[113] is an early patent decision from the Exchequer Court of Canada. The court determined that patent law was conceived to "reward those who make some substantial discovery or invention which adds to our knowledge and makes a step in advance in the useful arts".[114] Therefore, the goal of patent law is to advance useful arts. To determine whether the invention at issue had the requisite ingenuity, the court concluded that it did not matter whether the inventive ingenuity is in the underlying idea of an invention or in the practical application.[115] As long as there is inventive ingenuity in either or both, the invention would be considered patentable. Later courts have taken this discussion in *Gypsum* as a proposition that a novel idea with a non-inventive practical application is patentable.

Lawson v. Canada (1970)[116] is a noteworthy case because it provided one of the first definitions of the term "art" in s. 2 of the *Patent Act*. In *Lawson*, the court considered whether a method to subdivide a parcel of building land was patentable subject matter. The court determined that not all new and useful arts are patentable under s. 2[117] and that "words of limitation must be read into s. 2(d)"[118] (now s. 2). Then the court gave the following definition of art:

> An art or operation is an act or series of acts performed by some physical agent upon some physical object and producing in such object some change either of character or of condition. It is abstract in that, it is capable of contemplation of the mind. It is concrete in that it consists in the application of

111 *Supra* note 2, s. 2.

112 *Ibid*.

113 *Canadian Gypsum Co. v. Gypsum, Lime & Alabastine, Canada Ltd.* (1931), [1931] Ex. C.R. 180, 1931 CarswellNat 36 (Can. Ex. Ct.) [*Gypsum* cited to Ex. C.R.].

114 *Ibid* at para. 13.

115 *Ibid*.

116 *Lawson v. Canada (Commissioner of Patents)*, [1970] Ex. C.J. No. 13, 62 C.P.R. 101 [*Lawson* cited to Ex. C.J.].

117 *Ibid* at para. 25.

118 *Ibid* at para. 28.

> physical agents to physical objects and is then apparent to the senses in connection with some tangible object or instrument.[119]

As in *Gypsum*, the court added that a patentable invention can be the means, not the end. Furthermore, the court concluded that patentable art must be within the economic endeavour, not within the professional field.[120] This principle has been used to prevent business methods from being patentable in Canada.[121] The court went on to note that there are not any substantial differences between the terms "art" and "process" within the *Patent Act*.[122] Also, "process" is same as "method".

In *Tennessee Eastman Co. v. Canada (Commissioner of Patents)* (1970),[123] the Exchequer Court of Canada examined in detail whether a method for medical or surgical process is patentable subject matter in Canada. To determine whether such process would be considered patentable, the court stated that: "It is well settled, I think, that as there used 'art' may include a method or process and that, shortly stated, 'process' is the use of a method that produces a useful result when applied to some physical object or material".[124] The claimed method was deemed not patentable because it did not produce any result in "trade, commerce, or industry" or a result that is "essentially economic".[125] This case was appealed to the Supreme Court of Canada and the Supreme Court agreed with the Exchequer Court's reasoning in the case.[126] The Supreme Court of Canada noted that Canadian courts should not take guidance from British law because the U.K statute is substantially different from the *Canadian Patent Act*.[127]

The next relevant case is *Shell Oil Co. v. Canada (Patent Commissioner)* (1982).[128] *Shell Oil* is probably the most cited case for defining the term "art" in section 2. The claimed invention in *Shell Oil* was a new discovery that known com-

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119 *Ibid* at para. 30.

120 *Ibid* at paras. 36-37.

121 Norman Siebrasse, "Comment on *Monsanto Canada Inc v. Schmeiser*" (2004) 83 Can Bar Rev 967 at 972-973.

122 *Lawson*, *supra* note 116 at para. 34.

123 *Tennessee Eastman Co. v. Canada (Commissioner of Patents)*, [1970] Ex. C.J. No. 14, 62 C.P.R. 117 [*Tennessee Eastman* 1970 cited to Ex. C.J.].

124 *Ibid* at para. 19.

125 *Ibid* at para. 49.

126 *Tennessee Eastman Co. v. Canada (Commissioner of Patents)*, [1974] S.C.R. 111, 8 C.P.R. (2d) 202 [*Tennessee Eastman* 1972 cited to C.P.R.].

127 *Ibid* at 120.

128 *Shell Oil Co. v. Canada (Patent Commissioner)*, [1982] 2 S.C.R. 536, 1982 CarswellNat 487 [*Shell Oil* cited to Carswell Nat]. The invention at issue in this case was a discovery of a chemical compound as a plant growth regulator and the patent applicant sought to patent the chemical composition of the compound. There was no inventiveness in mixing the chemicals in this way but the patent applicant had found a new application for this chemical composition as a plant growth regulator. The chemical composition comprised of old and new compounds mixed with an adjuvant. The patent applicant did not seek to patent the new compounds. The Supreme Court of Canada granted a patent in this case because they found that the applicant's discovery of using old compounds in a new way was an invention within the meaning of s. 2 of the *Patent*

pounds can be used for plant growth regulators. The court defined "new and useful art" in the following paragraph:

> What then is the "invention" under s. 2? I believe it is the application of this new knowledge to effect a desired result which has an undisputed commercial value and that it falls within the words "any new and useful art". I think the word "art" in the context of the definition must be given its general connotation of "learning" or "knowledge" as commonly used in expressions such as "the state of the art" or "the prior art". The appellant's discovery in this case has added to the cumulative wisdom on the subject of these compounds by recognition of their hitherto unrecognized properties and it has established the method whereby these properties may be realized through practical application. In my view this constitutes "new and useful art" and the compositions are the practical embodiment of the new knowledge.[129]

Based on this statement, "new and useful art" under s. 2 can be summarized as the following:

1. It produces a useful commercial result;

2. It is a new and innovative method of applying skill and knowledge; and

3. There is a practical application of the new knowledge and it is not merely a disembodied idea.

In this case, the Supreme Court of Canada found that the claimed invention's inventive ingenuity is in "the discovery of the new use" and as in *Gypsum*, no further inventiveness needed to be demonstrated in its application to show that the claimed invention is a "new and useful art".[130] In *Shell Oil*, the Supreme Court of Canada cited definitions of "art" from *Tennessee Eastman* and *Lawson* with an approval and stated that these decisions broadly defined the term "art".[131] The court found that the claimed invention is a patentable art because it met all three requirements stated above.[132]

Progressive Games Inc. v. Canada (Commissioner of Patents) (1999)[133] demonstrated how to apply the *Shell Oil* three-step test for determining a patentable art. The claimed invention here was "a modified version of a five-card stud poker game which can be played in a casino or cardroom environment".[134] The Federal Court of Canada found that this claimed invention 1) had practical application because there is physical manipulation of cards and 2) it is commercially useful as the game can be licensed to casinos, but 3) it did not contribute any new learning or

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Act. The court granted a patent on chemical compositions because they are the practical embodiment of the new knowledge discovered by the applicant.

129 *Ibid* at para. 30.

130 *Ibid* at para. 31.

131 *Ibid* at paras. 41–43.

132 *Ibid* at para. 43.

133 *Progressive Games Inc. v. Canada (Commissioner of Patents)*, [1999] F.C.J. No. 1623, 3 C.P.R. (4th) 517 (Fed. T.D.) [*Progressive Games* cited to FCJ].

134 *Ibid* at para. 2.

knowledge to the cumulative wisdom.[135] Thus, this claimed invention was deemed not patentable. The court noted that even though the claimed invention received a patent grant in the U.S., the Canadian court is not bound by that knowledge.[136] One must note that it is interesting that the court considered "physical manipulation of cards" as satisfying the practical application requirement. Prior to *Progressive Games*, courts seemed to be using the *Lawson* definition, which said that for there to be a practical application, there must be a change in character or condition of a physical object.

The following two decisions discussed patentability of computer-related inventions. In *Re Application No. 096,284* (1978),[137] the Patent Appeal Board of Canada listed rules for determining patentability of computer-related inventions. The board defined the term "algorithm" as "a set of rules or processes for solving a problem in a finite number of steps, and in general can be equated to an abstract theorem".[138] The board stated that a computer programme might be described as a "method of processing data in a digital computer" and broadly, the same definition may be used to define an algorithm.[139] Unlike *Alappat*, the board found that deploying a computer programme on a computer does not create a new computer but merely produces a temporary condition within it. Therefore, the board considered that algorithms and computer programmes are not patentable subject matter because it does not take more than the normal skills of a programmer to develop them.[140] To clarify any confusion in law, the court summarized their position as such:

> 1. Claims to a computer programme *per se* are *not* patentable;
>
> 2. Claims to a new method of programming a computer are *not* patentable;
>
> 3. Claims to a computer programmed in a novel manner, *expressed in any and all modes*, where the novelty lies solely in the programme or algorithm, are *not* directed to patentable subject-matter under s. 2 of the *Patent Act*;
>
> 4. Claims to a computing apparatus programmed in a novel manner, where the patentable advance is in the apparatus itself, are patentable; and
>
> 5. Claims to a method or process carried out with a specific novel apparatus devised to implement a newly discovered idea are patentable.[141]

Sookman points out that this definition of "algorithm" is broader than the

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135 *Ibid* at paras. 18–20.

136 *Ibid* at para. 24.

137 *Re Application No. 096,284* (1978), 52 C.P.R. (2d) 96 (Can. Pat. App. Bd. & Pat. Commr.) [*Re Application No*].

138 *Ibid* at para. 34.

139 *Ibid* at para. 36.

140 *Ibid* at para. 33.

141 *Ibid* at para. 41.

American version.[142] The American courts have defined "algorithm" as "a procedure for solving a given type of mathematical problem" and algorithms are not patentable because they are considered to be "mere scientific principle or abstract theorem".[143] In Canada, the Patent Appeal Board has defined "algorithm" as "a set of rules or processes for solving a problem in a finite number of steps" and it is considered an abstract theorem and unpatentable under s. 27(8).[144] The Canadian definition is broader because algorithm can be a series of steps for solving any problems, not just mathematical problems.

The Federal Court of Appeal had a chance to consider whether a computer programme is a patentable invention in *Schlumberger Ltd. v. Canada (Patent Commissioner)* (1981).[145] The invention at issue in this case was a process for extracting meaningful information for oil and gas exploration by performing a series of calculations on some measurements on a computer. The applicant argued that this was not a computer programme but a complex process that used a computer programme to implement the invention into an application.[146] The Federal Court of Canada discussed whether an invention that uses computer technology is patentable subject matter.[147] The court stated that to see if a computer-related invention is patentable, one must first determine what has been discovered by the inventor. The court observed that there are inherent functions that computers are created to perform, such as making calculations. Therefore, using a computer to make calculations is not new and it is not patentable. Moreover, if a computer is doing a job a man can do by making series of mental operations, then it would be not patentable since mental operations and processes are not patentable subject matter under s. 2. Thus, using a computer to perform a function does not transform unpatentable subject matter into a patentable one. The court also stated that mathematical formulae are like "mere scientific principle[s] or abstract theorem[s]". Therefore, using a computer to make calculations according to a mathematical formula is not patentable. It is important to note that the court did not preclude the possibility that an invention involving computers may be patentable.[148]

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142 Sookman, *supra* note 48.

143 *Gottschalk v. Benson*, 409 U.S. 63, 93 S.Ct. 253 (1972).

144 *Re Application No*, *supra* note 137 at para. 34.

145 *Schlumberger Ltd. v. Canada (Patent Commissioner)*, [1982] 1 F.C. 845, 56 C.P.R. (2d) 204 (Fed. C.A.) [*Schlumberger Ltd.* cited to F.C.].

146 *Ibid* at para. 4.

147 *Ibid* at para. 5.

148 *Ibid* at para. 5; According to Sookman (*supra* note 48), after *Schlumberger*, computer-related inventions such as control systems, data manipulation and information enhancement systems, and operating system software have received patents in Canada. The following computer-related inventions are some of the applications that the Patent Appeal Board of Canada found to have statutory subject matter: *Re Application for Patent of General Electric Co.* (1984), 6 C.P.R. (3d) 191 (Can. Pat. App. Bd. & Pat. Commr.); *Re Application No. 287,623 for Patent by Bartley* (1983), 3 C.P.R. (3d) 396 (Can. Pat. App. Bd. & Pat. Commr.); *Re Application for Patent of Dissly Research Corp.* (1984), 6 C.P.R. (3d) 420 (Can. Pat. App. Bd. & Pat. Commr.); *Re Honeywell Information Systems Inc.* (1986), 13 C.P.R. (3d) 462 (Can. Pat. App. Bd. & Pat. Commr.); *Re*

IV. RECENT CHANGE IN CANADIAN JURISPRUDENCE

On October 14, 2010, the Federal Court of Canada released its decision regarding patentability of Amazon.com's one-click technology. Normally, a person purchasing goods on a website is required to provide their shipping and payment information each time he makes a purchase from the website. The one-click technology is a method to streamline the online shopping experience by removing the steps where customers are required to provide their information.[149] The one-click technology accomplishes this goal by using cookies to store a customer-specific identifier on a customer's computer. The first time a customer provides his information to make a purchase on Amazon.com, Amazon.com's server computer stores this information. The next time the same customer visits Amazon.com to make a purchase, he does not need to provide his purchasing information again because the identifier stored on his machine is sent to the server to retrieve the customer's previously provided information. Thus, by merely clicking once, a customer can purchase goods on Amazon.com.

Amazon.com's one-click technology received its patent in the U.S. in 1999.[150] Many observers questioned the validity of Amazon.com's patent.[151] Jaffe & Lerner describe Amazon.com's U.S. patent as a low quality one because one-click technology lacks novelty and non-obviousness.[152] Others had already developed similar systems but, even if no similar systems had existed, the authors noted that it would not be difficult for a person working in the same industry to think of and implement the one-click technology.[153] Jaffe & Lerner and others have argued that trivial and obvious inventions like the Amazon.com's one-click system should not be patentable because that would allow other trivial and obvious computer-related inventions to be patentable.[154] Patenting trivial and obvious inventions would be detrimental

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Application of Fujitsu Ltd. (Patent No. 1,200,911) (1985), 9 C.P.R. (3d) 475 (Can. Pat. App. Bd. & Pat. Commr.); *Re Application for Patent of I.B.M. Corp.* (1984), 6 C.P.R. (3d) 99 (Can. Pat. App. Bd. & Pat. Commr.).

149 *Amazon/FCC*, *supra* note 16 at para. 5.

150 Jaffe & Lerner, *supra* note 44 at 74.

151 *Ibid* at 75; Annette Vee, "Carving up the Commons: How Software Patents are Impacting our Digital Composition Environments" (2010) 27 Computers and Composition 179; Robert E Thomas & Larry A DiMatteo, "Harmonizing the International Law of Business Method and Software Patents: Following Europe's Lead" (2007) 16 Tex. Intell. Prop. L.J. 1; Filmar, *supra* note 4; Starling David Hunter III, "Have Business Method Patents Gotten a Bum Rap? Some Empirical Evidence" (2004) 6 JITTA 1; Stephen Dirksen et al, "Who's afraid of *Amazon.com v. Barnesandnoble.com*?" 2001 Duke L. & Tech. Rev. 0003.

152 Jaffe & Lerner, *supra* note 43 at 74-75.

153 *Ibid*.

154 *Ibid*; Reshika Dhir & Nassim Nasser, "Business Method Patents: The State of the Art after the Amazon.com Decision" (2010) 23 IPJ 107; Filmar, *supra* note 4; Bessen & Meurer, *supra* note 61; Boldrin & Levine, *supra* note 61; Lemley, *supra* note 11; McFarlane & Litts, *supra* note 53; Abraham, *supra* note 60; Robert P Merges, "As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts and Patent System Reform" (1999) 14 Berkeley Tech. L.J. 577; Paul Christ, "Patenting

to our society because it would deteriorate the patent system's performance.

Upon receiving its patent in the U.S., Amazon.com had applied for and received a preliminary injunction against its direct competitor, Barnes & Noble, for infringing its one-click patent. CAFC eventually overturned the preliminary injunction and commented that the validity of Amazon.com's one-click patent is sufficiently questionable.[155] The infringement lawsuit against Barnes & Noble never reached its conclusion because the parties eventually settled out of court.

Amazon.com filed an application to patent its one-click technology in Canada on September 11th, 1998.[156] Amazon.com's patent application was rejected by a patent examiner because the examiner found that the claimed invention was obvious and it was not patentable subject matter in Canada.[157] In the following sections, I shall discuss how the Patent Appeal Board and Federal Court of Canada analyzed one-click's patentability.

(a) Re Amazon.com Inc. (PAB)

Amazon.com's patent application is titled "method and system for placing a purchase order via a communications network" and they made 75 claims in its application.[158] The Patent Appeal Board (PAB) overturned the patent examiner's finding that Amazon.com's claimed invention is obvious but the board came to the same conclusion that the claimed invention is not patentable subject matter under s. 2 of the *Patent Act*.

The patent examiner had reported that the one-click technology is obvious (i.e. lacks inventive ingenuity) because prior art existed that described necessary knowledge to build the one-click technology.[159] Contrary to the examiner's finding, the board determined that one-click technology is not obvious because, even though using cookies to implement the one-click idea is not ingenious, the idea of modifying the online shopping process by using the one-click technology is ingenious.[160] Therefore, the board concluded that Amazon.com's one-click was not obvious.

Similar to *Shell Oil*, the board found that the inventive ingenuity of the one-click system is in its underlying idea rather than in its application. However, rather than following the Supreme Court of Canada's three-step approach in *Shell Oil*, the board performed its own four-step analysis to assess patentability of the one-click

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Marketing Methods: A Missing Topic in the Classroom" (2005) 27 Journal of Marketing Education 52; Todd Q Dickinson, "Remarks of Assistant Secretary of Commerce and Commissioner of Patents and Trademarks" (Paper delivered at the National Academies, Board of Sciences, Technology and Economic Policy in Washington, DC 2000) [unpublished].

155 *Amazon.com Inc. v. Barnsandnoble.com, Inc.*, 239 F.3d 1343 at 1347, 2001 U.S. App. LEXIS 2163.

156 *Amazon/FCC*, *supra*, note 16 at para. 4.

157 *Amazon.com Inc., Re* (2009), 75 C.P.R. (4th) 85 (Can. Pat. App. Bd. & Pat. Commr.) at paras. 28-31.

158 *Ibid* at para. 1.

159 *Ibid* at para. 28.

160 *Ibid* at para. 101.

technology. The following is the four-step test the board used:

1. Consider both the form and the substance of the claims.
    - By "form" is meant what the language of a claim, on its face, appears to be defining as the invention.
    - The approach to assess the substance is to fully understand the nature of the claimed invention, and determine what has been added to human knowledge by the claimed invention.
2. Subject matter must fit the definition of a category.
    - As defined in *Lawson*, if the claimed invention falls in the "art" category, then there must be a change of character or condition.
3. Excluded (non-statutory) subject matter.
4. Non-technological subject matter is not statutory.[161]

Although the board considered the definition of patentable art in *Shell Oil*, the board ended up only using the *Lawson* definition of "art" in their section 2 analysis. As mentioned above, the Supreme Court of Canada in *Shell Oil* cited the *Lawson* definition within its decision to articulate that "art" is a broad term. After considering what the Supreme Court said in *Shell Oil*, the board defined the term "art" as something more than "new processes or products or manufacturing techniques" and it should be "an act or series of acts performed by some physical agent upon some physical object and producing in such object some change either of character or of condition".[162] Furthermore, the board stated that "art" must be "scientific or technological knowledge" because when one uses the term "art" in phrases such as "the state of the art" or "the prior art", "art" in those contexts refers to scientific or technical knowledge.[163] Thus, the board interpreted "art" as "an act or series of acts that . . . constitute a practical application of scientific or technological knowledge" and that "a practical application of knowledge necessarily implies an act or series of acts resulting in a change of character or condition of a physical object".[164] The board's analysis of the law effectively stripped the *Shell Oil* definition down to the *Lawson* version, which emphasizes a requirement that a patentable art must change character or condition in a physical object.

After applying the four-step analysis, the board found Amazon.com's one-click technology not patentable under s. 2 of the *Patent Act*. The board concluded that what was discovered by the patent applicant were "particular rules for carrying out an online order".[165] Although the applicant claimed method and system claims, the board stated that in substance they were the same thing and that all 75 claims must fall under the "art" or "process" category in s. 2.[166] The board gave following

161 *Ibid* at para. 124.
162 *Ibid* at para. 133.
163 *Ibid* at para. 135.
164 *Ibid* at para. 137.
165 *Ibid* at para. 172.
166 *Ibid* at para. 173.

reasons for concluding that the one-click technology is not a patentable art:

> 1. The claimed invention was not an "art" under s. 2 because there is no change in the products or goods that are being ordered.[167]
>
> 2. This is a method of doing business and Canada has traditionally excluded such methods from being patentable.[168]
>
> 3. A method of doing business does not amount to technological subject matter.[169]

One might observe that the Patent Appeal Board in this case may have stretched the law in few places to declare that the one-click technology is unpatentable subject matter. For instance, unlike *Progressive Games*, the board refused to strictly apply the three-step patentable art test developed by the Supreme Court of Canada in *Shell Oil*. Instead, the board applied the *Lawson* test which requires a patentable art to have some physical component that changes in character or condition. It is interesting to note that this decision was released after *Bilski*/*CAFC*, which declared that the machine-or-transformation test was the sole test for determining patentability of a process invention. The common theme in the *Lawson* test and the machine-or-transformation test is that both tests require method claims to have some association with a physical thing to be patentable. Perhaps, one may speculate that the *Bilski/CAFC* decision had some influence on the board's approach in *Re Amazon.com Inc.*

On the other hand, *Bilski*/*CAFC* did not conclude that a business method is excluded subject matter in the U.S. Moreover, *Bilski*/*CAFC* had rejected the "technological art" test used by the patent examiner and the Patent Appeal Board,[170] which required an invention to make some advancement in the fields of science or technology for the invention to be patentable. Therefore, one might suggest that the board attempted to go further than the American court to permanently close the door on intangible inventions.

(b) Manual of Patent Office Practice

The Canadian Intellectual Property Office (CIPO) provides the Manual of Patent Office Practice (MOPOP) on its website to help guide patent examiners, patent agents, patent applicants, and the public about the patent examination and prosecution processes at CIPO. MOPOP is not a binding legal authority but it is an important document because it states the official position of CIPO, which is a sole entity that is responsible for examining and issuing patents in Canada.[171] Therefore, MO-

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167 *Ibid* at para. 175-176.

168 *Ibid* at para. 179.

169 *Ibid* at para. 186.

170 *Supra* note 69 at 960.

171 Intellectual Property Institute of Canada (IPIC), "Draft Chapter 16 of the Manual of Patent Office Practice: Computer Implemented Inventions", Comments and Recommendations on Draft Chapter 16, (19 August 2010) at 4, online: IPIC <http://www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/vwapj/16062010commentaires-16062010comments-eng.pdf/$FILE/16062010commentaires-16062010comments-eng.pdf>.

POP should contain rules that reflect the most current patent law in Canada. Within MOPOP, chapter 12 — Subject Matter and Utility, chapter 13 — Examination of Applications, and chapter 16 — Computer Implemented Inventions are relevant to this discussion.

Chapter 16 was revised recently on October 2010. This revision took place after the Patent Appeal Board released its decision on *Re Amazon.com Inc.* but before the Federal Court of Canada released its decision on *Amazon/FCC*. Before the revision, CIPO asked the public to comment on a new draft of chapter 16. CIPO received feedbacks from the Intellectual Property Institute of Canada (IPIC), the Federation Internationale des Conseils en Propriété Industrielle (FICPI), and SAP Canada. All three groups noted that chapters 12, 13, and 16 contain material that is inappropriate and inconsistent with Canadian law.[172] IPIC commented that all three chapters required a patentable invention to meet a technological requirement even though there is no basis for it in Canadian patent law.[173] IPIC and FICPI noted that the draft version of chapter 16 stated that claims will be examined for patentability based on a contribution approach even though there is no basis for a contribution approach in Canadian law. The contribution approach originates from the European patent law and determines the patentability of a claimed invention by looking at the invention's contribution to a field not excluded from patentability. This approach is no longer used by the Europe Patent Office.[174] All three groups agreed that CIPO should delay the chapter 16 revision until Amazon.com received its final decision from the courts.

(c) Amazon.com Inc. v. Canada (FCC)

On October 14, 2010, the Federal Court of Canada (FCC) released its decision on *Amazon/FCC*.[175] The court carried out a *de novo* examination of the one-click application because they found that the Patent Commissioner had made fundamental errors in law in the s. 2 analysis.[176] To summarize, the court found that the Commissioner erred in law in the following steps of her analysis:

> 1. The Commissioner should not have used the form and substance approach. The correct approach would have been to use the purposive construction.[177]
>
> - This approach led the board to separately consider the non-novel and novel components of the claimed invention. The proper approach would have been to consider the invention as a

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172 *Ibid*; Letter from Robert B. Storey, President of FICPI Canada, to Barney de Schneider, Assistant Commissioner of Patents (16 September 2009), online: Canadian Intellectual Property Office <http://www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/eng/wr02191.html>.

173 IPIC, *supra* note 171 at A-15.

174 IPIC, *supra* note 171 at 5.

175 *Amazon/FCC*, *supra* note 16.

176 *Ibid* at para. 72.

177 *Ibid* at paras. 38-39.

whole.[178]

2. The Commissioner erred by relying on the U.K. jurisprudence. The U.K. statute is different from the Canadian statute; the U.K. law is inapplicable.[179]

3. The Commissioner used a narrow interpretation of "physical change in character or condition".[180]

4. Business methods are not traditionally excluded subject matter in Canada.[181]

5. A patentable art does not have to be "scientific or technological". There is no support for this rule in the Canadian jurisprudence.[182]

The Supreme Court of Canada had previously stated that courts should use purposive construction to interpret patent claims for validity and infringement.[183] Purposive construction allows one to identify the substance of the claim by identifying the claim's essential elements without doing a subjective analysis of the claim.

Regarding the use of foreign law in patent cases, FCC said that foreign law can provide guidance but is not determinative and should be used with caution.[184] The Patent Commissioner had erred because she did not ground her legal analysis of the one-click technology within the Canadian patent jurisprudence. FCC noted that some jurisdictions may be more relevant than others.[185] For instance, the U.S. jurisprudence may be more persuasive because the American statutory definition of "invention" closely resembles the Canadian statutory definition.[186] The court noted that the Australian jurisprudence may provide some assistance as well because Australia follows the U.S. jurisprudence.[187] On the contrary, the U.K statute does not define the term "invention" similarly to the Canadian statute.[188] Instead, the U.K. follows the approach of the European Patent Convention (EPC) by listing categories of excluded subject matters in its statute.[189] Even before the U.K. followed the EPC approach, the Exchequer Court of Canada in *Tennessee Eastman* had warned the courts against taking guidance from the U.K jurisprudence because their statute is significantly different from ours. Therefore, the Commissioner should not have examined the U.K case law for assistance in carrying out the s. 2

178 *Ibid* at para. 42.
179 *Ibid* at para. 45.
180 *Ibid* at para. 60.
181 *Ibid* at para. 61.
182 *Ibid* at paras. 69-70.
183 *Ibid* at para. 38.
184 *Ibid* at para. 32.
185 *Ibid.*
186 *Ibid* at para. 46, 55.
187 *Ibid* at para. 57.
188 *Ibid* at para. 34.
189 *Ibid* at para. 33.

analysis.

A significant aspect of this decision is that FCC took the opportunity to restate and clarify the test for determining patentable art under s. 2 of the *Patent Act*. The court stated that *Shell Oil*'s three-step test for "art" should be the starting point for examining method claims.[190] As mentioned above, the *Shell Oil* test can be summarized as the following:

> 1. It must not be a disembodied idea but have a method of practical application;
>
> 2. It must be a new and inventive method of applying skill and knowledge; and
>
> 3. It must have a commercially useful result.[191]

As discussed in section 4 of this paper, *Shell Oil* had cited both *Tennessee Eastman* and *Lawson* as evidence that courts have been construing the term "art" in a broad manner. However, in *Amazon/FCC*, the Federal Court decided that it was time to stop using the restrictive definition in *Lawson*, which requires a patentable invention to change character or condition of a physical object, because *Lawson* is old law that does not reflect the inventions of the information era.[192] The court goes on to state that the practical application requirement has a "wider definition of physical change in character or condition or the concrete embodiment of an idea".[193] Henceforth, the practical application requirement is satisfied if there is "some sort of manifestation or effect or change of character"[194] and the material object itself does not necessarily have to physically change in character or condition.[195] To support this proposition, the court cited *Bilski/SCOTUS* where the U.S. refused to adopt the machine-or-transformation test as the sole test for determining patentability of process claims.[196]

In its analysis, FCC determined that there are two types of claims here: machine claims and process claims.[197] With regards to the machine claims, the court concluded that "this is not merely a mathematical formula which could be carried on without a machine or simply a computer program".[198] Therefore, the court found that one-click's machine claims are patentable as a "machine" under s. 2 of the *Patent Act*. One must note that, the court did not explain why using computer programmes in general purpose computers to implement "an online ordering process" is not a computer program but a machine.

Next, the court goes on to determine whether the process claims are patentable under s. 2 of the *Patent Act*. By eliminating the *Lawson* definition of "art" from the

190 *Ibid* at para. 50.
191 *Ibid* at para. 52.
192 *Ibid* at paras. 51, 53.
193 *Ibid* at para. 60.
194 *Ibid* at para. 53.
195 *Ibid* at para. 59.
196 *Ibid* at para. 55.
197 *Ibid* at para. 73-74.
198 *Ibid* at para. 73.

three-step *Shell Oil* test for "art", FCC concluded that Amazon.com's one-click technology is patentable subject matter under s. 2 of the *Patent Act*.[199] Since an invention no longer needs to change the character or condition of a physical object to satisfy the practical application requirement in the patentable art test, the court found that there is "physical effect" or "transformation or change of character" when a "customer manipulates their computer" and creates an order.[200] Therefore, according to FCC, the one-click technology is patentable subject matter because this is a new and useful art with a practical application that produces a commercially useful result.

This decision sided with the industry observers like IPIC and confirmed that many of the recent revisions that were made to MOPOP, such as technological field requirement, form and substance examination, and business method exclusion, are inappropriate and inconsistent with Canadian law.

(d) Analysis (Lessons from Bilski)

By endorsing the machine-or-transformation test instead of the useful-concrete-tangible test for determining patentability of process claims, *Bilski/SCOTUS* made it more difficult for intangible inventions, such as business methods and software, to receive patents.[201] As discussed above, the machine-or-transformation test requires an invention to be associated with some physical object or representative of a physical object in a meaningful way (i.e. physicality requirement). However, it could be difficult for intangible inventions to satisfy the physicality requirement because they often do not have physical components, transform physical objects, or transform data representation of physical objects that is central to their purpose.[202] Thus, as long as the machine-or-transformation test remains the "important and useful clue" for determining patentability of process claims, it will be more difficult to patent intangible inventions in the U.S.

Although SCOTUS decided that the machine-or-transformation test is not the sole test for determining patentability of process claims in *Bilski/SCOTUS*, the court decided to keep the machine-or-transformation test as an important investigative tool for determining patentability of process claims. By continuing to keep the machine-or-transformation test around, SCOTUS seemed to be in agreement with CAFC that patent protection should not be too readily accessible for intangible inventions. Although the courts did not explicitly state their intentions but based on their comments in cases like *Laboratory Corp*, the U.S. courts seem to be aware of the harmful effects too many business methods and software patents had on the U.S. economy and was willing to remedy *State Street* through *Bilski*. The Canadian courts should learn from this U.S. history and realize that excessively broadening the scope of patentability for intangible invention can have undesirable consequences.

Admittedly, the machine-or-transformation test is less stringent than the *Law-*

199 *Ibid* at para. 77.

200 *Ibid* at para. 75.

201 Steven Seidenberg, "*Bilski*'s Finale", *Inside Counsel* 22 (September 2010) 24 at 24.

202 Ruzich, *supra* note 89 at 106.

son definition of patentable art. The *Lawson* definition requires a physical object to change in character or condition. By contrast, the machine-or-transformation test does not always require a patentable process to transform a physical object or substance.[203] The machine-or-transformation test can be satisfied if there is a transformation of data that represents a physical object or substance.

The approach in *Amazon/FCC* is likely to increase the availability of the patent protection to intangible inventions in Canada because the court effectively removed the physical transformation requirement from the *Lawson*/*Shell Oil* patentable art test. The court did not specify what type of "manifestation or effect or change of character" is necessary for one to claim that the practical application of their invention has a "physical effect". Although the court referred to the practical application requirement as being concrete and tangible, the court stated that a customer manipulating a general purpose computer to make a purchase online is a "physical effect".

When a person uses the one-click technology, a person clicks on their computer screen using their mouse to cause certain data to be transmitted from their computer to the vendor's computer. Therefore, FCC seems to be giving a broad interpretation of "physical effect" or "transformation or change of character or condition", because other than a click of a computer mouse, there is no "physical effect" or a transformation. Such interpretation effectively reduces the "physical effect" requirement down to nothing because any intangible invention that requires a user to interact with a computer through ordinary input devices like a mouse would be considered patentable as a consequence of *Amazon/FCC*. Canadian courts should remember how removing the physicality requirement in *State Street* caused undesirable results in the U.S. patent system. Canadian courts need to be mindful that too much or too little patent protection hinders progress.

Section 27(8) states that "no patent shall be granted for any mere scientific principle or abstract theorem".[204] It was determined in *Re Application No. 096,284* that a computer programme or an algorithm is an abstract theorem, therefore a computer programme or an algorithm is not patentable either. Since *Schlumberger*, it was clear in Canadian jurisprudence that a computer programme is not patentable if it makes a computer perform an inherent function of the computer (e.g. making calculations). Thus, prior to *Amazon/FCC*, it was difficult for computer-related inventions to receive patent protection in Canada.

An ordinary computer or internet user will most likely identify the one-click technology as an e-commerce tool or a computer programme.[205] As discussed above, Amazon.com sought and received a patent grant of one-click in the U.S., even though many in the industry observed that it failed to meet novelty and non-obviousness requirements. Despite this history, the Federal Court of Canada in *Amazon/FCC* still found the one-click system patentable under the machine and pro-

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203 Edwards & Steinberg, *supra* note 29 at 422, 430.

204 *Patent Act*, *supra* note 2, s. 27(8).

205 The one-click invention allows internet users to shop online. The one-click uses general purpose computers, the Internet, cookies, and a computer programme to implement the one-click idea. What was new in this invention was the discovery of new sequence of data exchange between a client machine and a server machine.

cess categories of s. 2 of the *Patent Act*. This conclusion may have been reached because the court examined one-click's patentability as a business method invention. Claiming one-click as a business method instead of a computer-related invention meant that in determining its patentability, FCC did not consider questions like, is this a computer programme *per se* or is this merely an algorithm, which is unpatentable under s. 27(8)? By claiming one-click as a business method, the patent applicant was able to bypass precedents from *Re Application No. 096,284* and *Schlumberger*, which make it difficult to patent computer-related inventions in Canada.

Whether one-click receives its patent in Canada as a business method invention or a computer-related invention, the monopoly on the one-click technology will have the same effect on the IT industry. That is, the one-click patent can prevent individuals from making use of the one-click technology or developing similar e-commerce tools[206] without proper permissions from its patentee. This demonstrates that current Canadian law is disconnected because it allows some patent applicants to bypass the difficulty of patenting computer-related invention by claiming their invention as a business method. Moreover, this practice makes it difficult for one to carry out a prior art search and gain knowledge from existing patents because consistent terminology is not used. The court should examine patentability of a single technology consistently. Patent applicants should not be able to use different labels to identify their inventions because it creates confusion and inconsistency in law.

Lastly, some argue that computer-related inventions should receive patent protection because the computer industry contributes significantly to Canadian economy.[207] However, others have noted that the computer industry does not need patent protection for innovation because this industry flourished without any patent protection in the past and it continues to grow at a rapid rate.[208] Without a strong indication that the Canadian patent system is failing, Canadian courts should not attempt to dramatically reinterpret existing patent law to widen patent protection for computer-related inventions because doing so may jeopardize the workings of the Canadian patent system.

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206 To explain briefly, some critics of the U.S patent system have noted that many software patents fail to satisfy the disclosure requirement and patents themselves are often worded vaguely, so it can be difficult to identify the scope of each software patent. When the scope is unclear, the patentee can claim overbroad coverage of his patent and claim infringement on those using similar technology. For more details, please see Klemens, *supra* note 17 and Bessen & Meurer, *supra* note 61.

207 Eloise Gratton, "Should Patent Protection be Considered for Computer Software-Related Innovations?" (2003) 7 Computer L. Rev. & T.J. 223 at 246-247; Raymond Trudeau, "Software Patents" (1993) 9 CIPR 233.

208 Robert E Thomas, "Debugging Software Patents: Increasing Innovation and Reducing Uncertainty in the Judicial Reform of Software Patent Law" (2008) 25 Santa Clara Computer & High Tech. L.J. 191 at 210, n. 143; *Bilski/SCOTUS*, *supra* note 15 at 3254; Boldrin & Levine, *supra* note 61 at 17-18.

CONCLUSION

To guarantee continued progress and innovation, patent law is construed as a balancing act between two opposing policy objectives: the incentive to create versus the right to access knowledge and information.[209] The patent law should attempt to maintain a balance between the two policy objectives because otherwise, as Justice Breyer articulated in *Laboratory Corp*, "too much patent protection can impede rather than 'promote the Progress of Science and useful Arts'".[210]

Courts have long struggled with drawing the boundaries of patentable subject matter but recently, inventions like software and business methods have further complicated that task. Providing broad patent protection to these inventions in the U.S. created unforeseen consequences, including stifling patent thickets and rent-seeking patent trolling, which caused the U.S. courts to re-examine their jurisprudence on the patentability of intangible inventions. Furthermore, upon studying the patent flood in the U.S., scholars realized that the public do not benefit from the disclosure of software and business method patents because they were usually overbroad and obscure.

Scholars have been hotly debating the patentability of business methods and software. Some have argued that business methods and software do not need patent protection for innovation and others have argued that both deserve patent protection for being large contributors of economy. It is uncertain where the line should be drawn but, at least from the experience of the U.S., one may conclude that opening the patent system too widely can seriously harm competition and jeopardize the workings of the patent system.

From *State Street* to *Bilski*, the U.S. has had extensive experience trying to identify where the patentability boundary should lie. Most recently they chose to make it more difficult for intangible inventions to receive patent protection. The patentability of Amazon's one-click technology remains undetermined in Canada as the Attorney General of Canada and the Commissioner of Patents are appealing the FCC decision to the Federal Court of Appeal. Until the parties exhaust the appeal process, the Canadian patent community will have to wait for the final answer on the patentability of intangible inventions like the one-click technology. Canadian courts should be mindful of the last 20 years of the American patent jurisprudence and be cautious of opening the patent floodgates for software and business methods.

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209 *Bilski/SCOTUS*, *supra* note 15 at 3252.

210 *Supra* note 67 at 126.