

Federal Court
of Appeal



CANADA

Cour d'appel
fédérale

Date: 20111124

Docket: A-435-10

Citation: 2011 FCA 328

**CORAM: SHARLOW J.A.
TRUDEL J.A.
STRATAS J.A.**

BETWEEN:

**THE ATTORNEY GENERAL OF CANADA
and THE COMMISSIONER OF PATENTS**

Appellants

and

AMAZON.COM, INC.

Respondent

and

**CANADIAN LIFE AND HEALTH INSURANCE ASSOCIATION INC.
and THE CANADIAN BANKERS ASSOCIATION**

Interveners

Heard at Toronto, Ontario, on June 21, 2011.
Judgment delivered at Ottawa, Ontario, on November 24, 2011.

REASONS FOR JUDGMENT BY:

SHARLOW J.A.

CONCURRED IN BY:

**TRUDEL J.A.
STRATAS J.A.**

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REASONS FOR JUDGMENT

SHARLOW J.A.

[1] The Commissioner of Patents refused to grant a patent to the respondent Amazon.com, Inc. for its one-click method of internet shopping because the claimed invention is not an “art” or a “process” within the meaning of those words as used in the definition of “invention” in section 2 of

the *Patent Act*, R.S.C. 1985, c. P-4. Amazon appealed the Commissioner's decision to the Federal Court pursuant to section 41 of the *Patent Act*. Justice Phelan allowed Amazon's appeal, quashed the Commissioner's decision, and ordered "an expedited re-examination with the direction that the claims constitute patentable subject matter to be assessed in a manner consistent with the Reasons for Judgment." Given Justice Phelan's construction of the patent claims, his directions amount to an order to the Commissioner to grant the patent. Justice Phelan's reasons are reported as *Amazon.com, Inc. v. Canada (Attorney General)*, 2010 FC 1011, [2010] 4 F.C.R. 541.

[2] The Commissioner did not grant the patent and has appealed the judgment of the Federal Court. Leave to intervene was granted to Canadian Life and Health Insurance Association Inc. and The Canadian Bankers Association, who made submissions supporting the position of the Attorney General of Canada.

[3] For the following reasons, I conclude that the appeal should be allowed but only to amend the direction so that it requires the Commissioner to re-examine the patent on an expedited basis in a manner consistent with these reasons.

Background

[4] On September 11, 1998, Amazon applied for a patent for an invention entitled "Method and System For Placing A Purchase Order Via A Communication Network" (Canadian Patent Application No. 2,246,933). The named inventors are Shel Kaphan, Joel Spiegel, Jeffrey P. Bezos

and Peri Harman. Priority is claimed from two United States patent applications (08/928,951 filed on September 12, 1997 and 009/046,503 filed March 23, 1998).

[5] The phrase “communication network” in the title of the patent application means (or at least includes) the internet. The internet connects computers located anywhere in the world, permitting them to share information in electronic form.

[6] Shopping on the internet is commonplace now, but in 1998 it was relatively new. The background information in the patent application says that internet shopping in 1998 presented problems because of the number of interactions required between the customer’s computer and the merchant’s computer.

[7] Consider, for example, the case of a person who makes an online purchase from a merchant and wishes to make another. For the second purchase, the customer would have to duplicate a number of steps taken for the first purchase. That could include keying into the customer’s computer the same personal information provided for the first purchase (generally, the customer’s name, address and credit card information) and sending it a second time to the merchant’s computer. The time taken to duplicate those steps could frustrate and discourage the customer, and could also increase the risk of the unauthorized interception of the customer’s personal information.

[8] Amazon’s solution to this problem is “one-click” internet shopping. During a customer’s first online contact with a merchant, the customer supplies the necessary personal information,

which is stored in the merchant's computer. The merchant's computer assigns that information a unique identifier (a cookie) and sends the identifier to the customer's computer, where it is stored. If the same customer makes a subsequent online visit to the same merchant, the merchant's computer identifies the customer by means of the cookie stored in the customer's computer. If the customer selects an item or items for purchase, the customer is prompted to take a single action, typically a mouse click on a button displayed on the customer's computer screen as provided by the merchant's computer, to complete the purchase transaction.

[9] The merchant's computer system is programmed to respond to that single click by taking a number of steps automatically. Using the customer's cookie, the merchant's computer associates the customer's order with the customer's personal information stored in the merchant's computer, generates the order, processes the payment by credit card, and generates shipping instructions. According to the disclosure in the patent application, the result of this automatic process of retrieving data and generating sale and delivery instructions is that the customer is spared the time and increased risk involved in resending personal information to the merchant's computer.

[10] The Amazon patent application asserts 75 claims. Claims 1 to 43 and 51 to 75 are drafted as "method" claims, and claims 44 to 50 are drafted as "system" claims. The parties have agreed that the disposition of this appeal should be based on Claim 1, typifying the method claims, and Claim 44, typifying the system claims. The claims are similar in that they describe the steps in the previous paragraph, as well as the steps a customer would take to change the personal information stored in the merchant's computer. Claims 1 and 44 read as follows:

Claim 1

A method in a client system for ordering an item, the method comprising:

receiving from a server system a client identifier of the client system;

persistently storing the client identifier at the client system;

when an item is to be ordered,

displaying information identifying the item and displaying an indication of a single action that is to be performed to order the identified item; and

in response to the single action being performed, sending to the server system a request to order the identified item along with the client identifier, the client identifier identifying account information previously supplied by a user of the client system wherein the user does not need to log in to the server system when ordering the item; and

when account information is to be changed,

coordinating the log in of the user to the server system;

receiving updated account information; and

sending the updated account information to the server system

whereby the user does not need to log in to the server system when ordering the item, but needs to log in to the server system when changing previously supplied account information.

Claim 44

A client system for ordering an item, comprising:

a component that receives from a server system a client identifier of the client system and that stores the client identifier persistently;

a component that orders an item by displaying information identifying the item along with an indication of a single action that is to be performed to order the identified item and by sending to the server system a request to order the identified item along with the client identifier, the client identifier identifying

account information previously supplied by a user wherein the user does not need to log in to the server system when ordering the item; and

A component that updates account information by coordinating the log in of the user to the server system, receiving updated account information from the user, and sending the updated account information to the server system.

[11] The phrase “client system” as used in these claims refers to the customer’s computer, the phrase “server system” refers to the merchant’s computer, and the phrase “client identifier” refers to the unique identifier, or cookie, that functions as the merchant’s key to the customer’s personal information stored on the merchant’s computer.

[12] A patent examiner issued a “Final Action” on June 1, 2004 rejecting all 75 claims on two grounds, obviousness and what I will refer to as “no patentable subject matter”, which is a shorthand expression for the conclusion that the application discloses no “invention” as defined in section 2 of the *Patent Act*. That definition reads as follows:

2. In this Act, except as otherwise provided,

“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.

2. Sauf disposition contraire, les définitions qui suivent s’appliquent à la présente loi.

« invention » Toute réalisation, tout procédé, toute machine, fabrication ou composition de matières, ainsi que tout perfectionnement de l’un d’eux, présentant le caractère de la nouveauté et de l’utilité.

[13] Amazon challenged the examiner’s decision, resulting in a hearing before the Patent Appeal Board on November 16, 2005. Two members of the Board assigned to that hearing retired from the

public service before a recommendation was finalized. A rehearing was scheduled before a new panel of the Board on September 18, 2008.

[14] The newly constituted Board recommended that the Commissioner reverse the examiner's objection on the ground of obviousness, uphold the examiner's objection on the ground of no patentable subject matter, and reject the application solely on the ground of no patentable subject matter. On March 3, 2009, the Commissioner made a ruling concurring with the findings and recommendations of the Board, and refusing to grant the patent. The Board's reasons and the Commissioner's ruling are reported as *Re Kaphan Patent Application No. 2,246,933*, 2009 LNCPAT 2 (QL), 75 C.P.R. (4th) 85.

[15] The principal issue in the Federal Court was whether the Commissioner erred in law in refusing to grant the patent for want of patentable subject matter. As mentioned above, Justice Phelan allowed the appeal and referred the patent application back to the Commissioner for reconsideration, effectively directing that the patent be issued. The Commissioner has appealed to this Court.

Patent experience in other jurisdictions

[16] Amazon has applied for patents in other jurisdictions for its one-click method of internet shopping, asserting claims that are apparently similar to those asserted in this case. It succeeded in obtaining patents in the United States, Australia and New Zealand, but not in Europe. In my view, it would not be helpful in the disposition of this appeal to attempt to explain the results of Amazon's

patent applications in other jurisdictions. It is enough to say that every jurisdiction has its own patent laws and administrative practices, and they are inconsistent with one another in important respects. The fact that a patent is granted for a particular invention in one or more other jurisdictions cannot determine whether it constitutes patentable subject matter in Canada.

Standard of review

[17] The question before the Commissioner was whether the claimed invention is within the scope of the definition of “invention” in section 2 of the *Patent Act*. The answer to that question required the Commissioner to interpret the definition of “invention”, and in particular the words “art” and “process” in that definition. Those are questions of law. The parties agree, as do I, that the Commissioner’s conclusions on those questions are reviewable on the standard of correctness: *Harvard College v. Canada (Commissioner of Patents)*, 2002, SCC 76, [2002] 4 S.C.R. 45, per Justice Bastarache writing for the majority at paragraphs 148-149. I note that Justice Binnie, who wrote the dissenting reasons in *Harvard College*, did not comment on the standard of review but seems to have applied the correctness standard (see paragraph 5).

[18] The Commissioner’s determination also requires a construction of the patent claims. Patent construction is a question of law, reviewable on the standard of correctness. However, any factual determinations made by the Commissioner in connection with the construction of the patent should be reviewed on the standard of reasonableness (see *Harvard College*, per Justice Bastarache at paragraph 151).

[19] Justice Phelan dealt with the standard of review at paragraphs 28 to 30 of his reasons. As I read those paragraphs, he also agreed that in this case, questions of law are to be reviewed on the standard of correctness, and questions of fact are to be reviewed on the standard of reasonableness. It is not alleged that Justice Phelan erred in his determination of the standards of review.

Issues on appeal

[20] The parties have proposed different characterizations of the issues under appeal. The Attorney General of Canada, the appellant in this case, says that the issue at the root of the appeal is whether Justice Phelan erred in concluding that the claimed invention is patentable subject matter as defined in section 2 of the *Patent Act*. The Attorney General of Canada argues that the determination of that issue requires this Court to answer two questions: (1) What, within the scope of the claims, have the inventors actually invented? (2) Does that invention fall within the statutory definition of “invention”?

[21] Amazon argues that the appeal raises two issues: (1) whether Justice Phelan erred in finding and applying the law of purposive construction when construing the claims for the purpose of determining whether those claims are directed to patentable subject matter, and (2) whether Justice Phelan erred in finding and applying the test for patentable “art” as set out in *Shell Oil Co. of Canada v. Canada (Commissioner of Patents)*, [1982] 2 S.C.R. 536, and *Progressive Games, Inc. v. Canada (Commissioner of Patents)* (1999), 177 F.T.R. 241, 3 C.P.R. (4th) 517 (F.C. T.D.), affirmed (2000), 9 C.P.R. (4th) 479 (F.C.A.).

[22] The parties' formulations of the issues under appeal disclose a fundamental disagreement as to the analytical framework to be applied in determining whether a patent application should be granted on the ground of no patentable subject matter (or, in other words, whether there is an "invention" as defined in section 2 of the *Patent Act*).

[23] The Attorney General of Canada takes the position that the Commissioner must in every case determine whether the claimed invention falls within the statutory definition of "invention", which necessarily requires the Commissioner to identify, independently of the construction of the patent claims, what the inventor has claimed to have invented – the "actual invention" – and to determine whether the actual invention falls within one of the categories enumerated in the statutory definition of "invention".

[24] Amazon argues that the first step in the Commissioner's analysis must be to construe the patent claims, and that any attempt to identify the "actual invention" as an independent question is wrong in principle because it "requires a court to approach construction in multiple steps, and to reach different constructions, applying different principles, depending upon the issue to be decided."

I understand Amazon's argument on this point to challenge paragraph 125 of the Commissioner's reasons, which reads as follows:

125 To summarize the above, for a claim to be patentable, the form of the claim (the claim on its face) must relate to one of the five patentable categories of invention (art, process, machine, manufacture or composition of matter). Also, the form of the claim must be neither excluded subject matter nor non-technological subject matter. Similarly, the substance of the claimed invention, or "what has been added to human knowledge", must fit under one of the five patentable categories of invention, and what has been added to human knowledge by the

claim must not be directed towards either excluded subject matter or non-technological subject matter.

[25] I summarize Amazon’s argument as follows. The Supreme Court of Canada has held that purposive patent construction is an antecedent to the determination of the validity or infringement of a patent: *Free World Trust v. Électro-Santé Inc.*, 2000 SCC 66, [2000] 2 S.C.R. 1024, *Whirlpool Corp. v. Camco Inc.*, 2000 SCC 67, [2000] 2 S.C.R. 1067. The Commissioner’s decision is inconsistent with those principles because it is based on a determination of the “actual invention” that is not based on a purposive construction of the claims. Further, the Commissioner’s emphasis on the “form” of the claim and the “substance of the claimed invention” represents an impermissible attempt to revive the analytical framework, discredited in *Free World Trust*, of construing a patent claim in two steps by determining the literal meaning of the claims first, and then the substance of the invention.

[26] In the discussion below, I deal first with the question of the analytical framework, and then with some subsidiary issues in dispute between the parties.

Discussion

(1) Analytical framework

[27] It is fundamental that “patent protection rests on the concept of a bargain between the inventor and the public” (per Justice Binnie at paragraph 13 of *Free World Trust*). The inventor is granted, for a limited time, the exclusive right to exploit his or her invention. In return, the inventor must disclose the invention to the public so that when the term of the patent expires, the invention

may be exploited by anyone. The object of the Commissioner’s examination of a patent application, understood in its broadest possible sense, is to determine whether the terms of the bargain are met.

That determination requires the Commissioner to interpret and apply the *Patent Act*.

[28] Pursuant to subsection 27(1) of the *Patent Act*, the Commissioner must grant a patent for an invention if the patent application meets the statutory conditions. Subsection 27(1) reads as follows:

27. (1) The Commissioner shall grant a patent for an invention to the inventor or the inventor’s legal representative if an application for the patent in Canada is filed in accordance with this Act and all other requirements for the issuance of a patent under this Act are met.

27. (1) Le commissaire accorde un brevet d’invention à l’inventeur ou à son représentant légal si la demande de brevet est déposée conformément à la présente loi et si les autres conditions de celle-ci sont remplies.

[29] Clearly, since a patent can be granted only “for an invention”, an applicant for a patent must claim something that comes within the scope of the definition of “invention” in section 2 of the *Patent Act*. Thus, the claimed invention must be:

... 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.

[...] Toute réalisation, tout procédé, toute machine, fabrication ou composition de matières, ainsi que tout perfectionnement de l’un d’eux, présentant le caractère de la nouveauté et de l’utilité.

[30] If the Commissioner is satisfied that an applicant for a patent is not by law entitled to be granted a patent, then section 40 of the *Patent Act* requires the Commissioner to refuse the application. Section 40 reads as follows:

40. Whenever the Commissioner is satisfied that an applicant is not by law entitled to be granted a patent, he shall refuse the application and, by registered letter addressed to the applicant or his registered agent, notify the applicant of the refusal and of the ground or reason therefor.

40. Chaque fois que le commissaire s'est assuré que le demandeur n'est pas fondé en droit à obtenir la concession d'un brevet, il rejette la demande et, par courrier recommandé adressé au demandeur ou à son agent enregistré, notifie à ce demandeur le rejet de la demande, ainsi que les motifs ou raisons du rejet.

[31] The decision of the Commissioner to grant or refuse a patent application is not a matter of discretion. By virtue of subsection 27(1) and section 40, the Commissioner must grant the application if the statutory conditions are met, and must not grant the application if the statutory conditions are not met (see *Harvard College*: Justice Bastarache for the majority at paragraph 144; Justice Binnie for the minority at paragraph 11). If the application is refused, the applicant is entitled to an explanation.

[32] The language of subsection 27(1) indicates that the Commissioner, when considering a patent application, must determine a number of questions. Some are procedural (for example, whether the application “is filed in accordance with this Act” – no procedural questions are in issue in this case). Others are questions of law and questions of mixed fact and law, captured by the phrase “all other requirements for the issuance of a patent under this Act”.

[33] In a certain sense, when the Commissioner is assessing a patent application under subsection 27(1) to determine whether all of the statutory requirements for a patent are met, the Commissioner is determining validity. That is, the Commissioner is essentially determining whether, if the patent

application is granted for the patent claims as set out in the patent application, the resulting patent would be valid.

[34] In the context of considering the validity of the patent if granted, the Commissioner must consider the definition of “invention” in section 2, as well as section 27 and any provisions to which section 27 refers expressly or by necessary implication (including sections 28.2 and 28.3). The key issues are novelty, utility, obviousness, and patentable subject matter.

[35] The parts of sections 27 that are most relevant to the issues that arise in this case are subsections 27(3), (4) and (8), which read as follows:

- | | |
|--|--|
| <p>27. (3) The specification of an invention must</p> <p><i>(a)</i> correctly and fully describe the invention and its operation or use as contemplated by the inventor;</p> <p><i>(b)</i> set out clearly the various steps in a process, or the method of constructing, making, compounding or using a machine, manufacture or composition of matter, in such full, clear, concise and exact terms as to enable any person skilled in the art or science to which it pertains, or with which it is most closely connected, to make, construct, compound or use it;</p> <p><i>(c)</i> in the case of a machine, explain the principle of the machine and the</p> | <p>27. (3) Le mémoire descriptif doit :</p> <p><i>a)</i> décrire d’une façon exacte et complète l’invention et son application ou exploitation, telles que les a conçues son inventeur;</p> <p><i>b)</i> exposer clairement les diverses phases d’un procédé, ou le mode de construction, de confection, de composition ou d’utilisation d’une machine, d’un objet manufacturé ou d’un composé de matières, dans des termes complets, clairs, concis et exacts qui permettent à toute personne versée dans l’art ou la science dont relève l’invention, ou dans l’art ou la science qui s’en rapproche le plus, de confectionner, construire, composer ou utiliser l’invention;</p> <p><i>c)</i> s’il s’agit d’une machine, en expliquer clairement le principe et la</p> |
|--|--|

best mode in which the inventor has contemplated the application of that principle; and

(d) in the case of a process, explain the necessary sequence, if any, of the various steps, so as to distinguish the invention from other inventions.

27. (4) The specification must end with a claim or claims defining distinctly and in explicit terms the subject-matter of the invention for which an exclusive privilege or property is claimed.

...

27. (8) No patent shall be granted for any mere scientific principle or abstract theorem.

meilleure manière dont son inventeur en a conçu l'application;

d) s'il s'agit d'un procédé, expliquer la suite nécessaire, le cas échéant, des diverses phases du procédé, de façon à distinguer l'invention en cause d'autres inventions.

27. (4) Le mémoire descriptif se termine par une ou plusieurs revendications définissant distinctement et en des termes explicites l'objet de l'invention dont le demandeur revendique la propriété ou le privilège exclusif.

[...]

27. (8) Il ne peut être octroyé de brevet pour de simples principes scientifiques ou conceptions théoriques.

[36] Subsections 27(3) and (4) are the statutory embodiment of the two sides of the bargain underlying the *Patent Act*. The information the inventor provides in the patent application pursuant to subsection 27(3) is the disclosure – the consideration offered by the inventor for the patent rights sought. In the words of paragraph 27(3)(a), the disclosure must (among other things) “fully describe the invention.”

[37] The information the inventor provides in the patent application pursuant to subsection 27(4) is the claim or claims – the scope of the monopoly claimed by the inventor. If the application is granted, the disclosure teaches the public about the invention, and the claims inform the public what would constitute infringement of the patent during its term.

[38] I do not propose to try to list all of the issues implicit in subsections 27(3), (4) and (8) and the statutory definition of “invention” that must be considered by the Commissioner, but it seems to me that they would include at least the following (which need not be considered in any particular order):

- (a) Patentable subject matter: What is the subject matter defined by the claim? Is the subject matter defined by the claim (i) an art, (ii) an improvement to an art, (iii) a process, (iv) an improvement to a process, (v) a machine, (vi) an improvement to a machine, (vii) a manufacture, (viii) an improvement to a manufacture, (ix) a composition of matter, or (x) an improvement to a composition of matter? If the subject matter defined by the claim is none of these, then the application must be refused on the basis of no patentable subject matter.

- (b) Novelty: Is the invention new, in the sense that the subject matter defined by the claim has not been disclosed as specified in paragraph 28.2(1)(a), (b), (c) or (d)? If not, then the application must be refused.

- (c) Utility: Does the invention have utility, in the sense that the subject matter defined by the claim is useful? If not, then the application must be refused.

- (d) Obviousness: Is the invention obvious, in the sense that the subject matter defined by the claim would have been obvious on the claim date to a person skilled in the art or science to which it pertains, having regard to the information specified in paragraph 28.3(a) or (b)? If so, then the application must be refused.

- (e) Statutory prohibition: Is subject matter defined by the claim a “mere scientific principle or theorem” within the meaning of subsection 27(8)? If so, then the application must be refused.

[39] The subject of each of the questions listed above is “the subject matter defined by the claim”, rather than the “invention” or “what the inventor claims to have invented”. That choice was made for the following reasons.

[40] The questions relating to novelty and obviousness (items (b) and (d)) must reflect sections 28.2 and 28.3 of the *Patent Act*, which specify how novelty and obviousness are to be determined. The subject of sections 28.2 and 28.3 is “the subject matter defined by the claim”. It is not “the invention” or “what the inventor claims to have invented”. In formulating items (b) and (d), the subject was chosen to match the grammatical subject of sections 28.2 and 28.3.

[41] For the questions relating to patentable subject matter, utility, and the prohibition on granting a patent for a mere scientific principle or theorem (items (a), (c) and (e)), there is no provision corresponding to sections 28.2 or 28.3 that provides a specific test. However, I see no reason why the subject of items (a), (c) and (e) should not be the same as the subject of items (b) and (d). For that reason, the subject of questions (a), (c), and (e) is also “the subject matter defined by the claim”.

[42] This formulation of the issues to be considered does not mean that the Commissioner cannot ask or determine what the inventor has actually invented, or what the inventor claims to have

invented. On the contrary, these are relevant and necessary questions in a number of contexts, including novelty, obviousness, and patentable subject matter. It may also arise in relation to other issues, for example, the determination of the identity of the inventor.

[43] However, it seems to me that the jurisprudence of the Supreme Court of Canada, in particular *Free World Trust* and *Whirlpool*, requires the Commissioner's identification of the actual invention to be grounded in a purposive construction of the patent claims. It cannot be determined solely on the basis of a literal reading of the patent claims, or a determination of the "substance of the invention" within the meaning of that phrase as used by Justice Binnie, writing for the Supreme Court of Canada in *Free World Trust*, at paragraph 46.

[44] Purposive construction will necessarily ensure that the Commissioner is alive to the possibility that a patent claim may be expressed in language that is deliberately or inadvertently deceptive. Thus, for example, what appears on its face to be a claim for an "art" or a "process" may, on a proper construction, be a claim for a mathematical formula and therefore not patentable subject matter. That was the situation in *Schlumberger Canada Ltd. v. Canada (Commissioner of Patents)*, [1982] 1 F.C. 845 (C.A).

[45] The Attorney General of Canada suggests that if the Commissioner cannot consider the issue of patentable subject matter as a question that is independent of patent construction, some doubt may be thrown on the correctness of cases decided before *Free World Trust* and *Whirlpool*. He cites, for example, *Canada (Commissioner of Patents) v. Farbwerke Hoechst AG Vormals*

Meister Lucius & Bruning, [1964] S.C.R. 49. In my view, the concern of the Attorney General of Canada is unfounded. It seems to me that *Farbwerke* would be decided today as it was in 1964. As I read that case, the patent application in issue was rejected for want of novelty (see page 53) and for obviousness (according to Justice Dickson, writing for the Supreme Court of Canada in *Consolboard Inc. v. MacMillan Bloedel (Saskatchewan) Limited*, [1981] 1 S.C.R. 504 at page 536).

[46] The Attorney General of Canada also cited *Shell Oil* as an example of a case in which a patent was granted for claims that *in form* were claims for a substance consisting of a combination of known and unpatentable ingredients, but were found to be claims for a new, useful and unobvious use for the claimed compositions as a plant growth regulant. I do not read *Shell Oil* as a case in which the substance of the claims prevailed over its form. As I read *Shell Oil*, Justice Wilson (who wrote for the Court) adopted an approach that was consistent with *Free World Trust* and *Whirlpool*, decided several years later. She construed the claims purposively and, on the basis of that construction, concluded that the subject matter of the claims was a new and useful art. She said this at pages 548-9:

... It is not the process of mixing the old compounds with the known adjuvants which is put forward as novel. It is the idea of applying the old compounds to the new use as plant growth regulators; the character of the adjuvants follows inevitably once their usefulness for that purpose has been discovered. 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 a 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 a "new and useful art" and the compositions are the practical embodiment of the new knowledge.

If I am right that the discovery of a new use for these compounds which is capable of practical application is an "invention" within the meaning of the definition, I can find nothing in the statute which would preclude a claim for these compositions. Section 36 does not seem to present a barrier because the inventive ingenuity here lies in the new use for the old compounds and not in the compounds themselves. Having discovered the use, the appellant has then combined the compounds with the appropriate carriers for their application to plants. It is not, in my view, necessary in the case of the discovery of a new use for an old compound that the combination of the compound with the adjuvant be itself novel in any sense other than that it is required in order to give effect to this particular use of the compound. This is not a case where the inventive ingenuity is alleged to lie in the combination; the combination is simply the means of realizing on the newly discovered potential of the compounds. This is a case where the inventive ingenuity is in the discovery of the new use and no further inventive step is required in the application of the compounds to that use, i.e. in the preparation of the appropriate compositions.

[47] In my view, there is nothing in the cases cited by the Attorney General of Canada that casts any doubt on the proposition that the Commissioner's determination of subject matter must be based on a purposive construction of the patent claims. Therefore, on the question of analytical framework, I agree with Justice Phelan that in determining subject matter solely on the basis of the inventive concept, the Commissioner adopted an analysis that is incorrect in law.

[48] However, it does not necessarily follow that the Commissioner was wrong in the result. In my view, it remains an open question whether the subject matter defined by the patent claims is an "invention" within the statutory definition. That issue is discussed in the next part of these reasons.

(2) Determination of patentable subject matter

[49] Any refusal of a patent application on the basis of no patentable subject matter must be grounded in the *Patent Act*. A patent application must be refused if the claim, construed purposively, describes something that is outside the enumerated categories in the statutory definition of “invention”. In this case, the parties disagree on whether the words “art” and “process” in that definition can include (a) something that is not scientific or technological in nature; (b) something that is merely a business method, or (c) something that causes no change to the character or condition of a physical thing.

[50] Justice Phelan, in 48 to 52 of his reasons, summarized the leading Canadian cases on the meaning of “art” and “process”. I agree substantially with his analysis and reproduce it here:

[48] On a preliminary note, it is immaterial that the Commissioner discussed the definition of “art” only and more generally and did not consider “process” separately. It is generally accepted that “method” and “process” are the same thing and that ‘art’ may include either: see *Lawson* [*v. Canada (Commissioner of Patents)*] (1970), 62 C.P.R. 101 (Ex. Ct)], above, at para. 34 citing to *Refrigerating Equipment Ltd. v. Drummond & Waltham System Inc.*, [1930] 4 D.L.R. 926 at 937. Indeed, many of the principal cases dealing with what is an art have in fact concerned processes, *Shell Oil* being a prime example. The issue is whether in her discussion of “art” the Commissioner adopted the correct legal definition, encompassing the courts’ interpretation of patentable processes.

[49] The Appellant [Amazon] alleges that the Commissioner has adopted too restrictive a definition of ‘art’ by ignoring *Shell Oil* and returning to the “physical manipulation” test outlined in *Lawson*. I note, however, that the Commissioner explicitly discusses *Shell Oil*; the reference to *Lawson* is within the context of that decision. The crux of the debate is her interpretation of *Shell Oil* to mean that “practical application” necessarily includes the change of character or condition in a physical object. I also note that she has injected a requirement that the “new learning or knowledge” outlined in *Shell Oil* be technological or scientific in nature.

[50] *Shell Oil* is unequivocally the starting point for the definition of a patentable 'art'. It focuses the inquiry on whether there is a practical application of the discovery or idea:

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 a 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 a "new and useful art" and the compositions are the practical embodiment of the new knowledge.

At 549

[51] The decision in *Lawson* is forty years old and was a useful starting point in *Shell Oil* for Wilson J to discuss a "more expansive" definition of art. However, it is not the authoritative guide for what constitutes patentable art. Although Wilson J did not reject the decision, she referred to it as part of the ongoing effort to create a wider definition which explicitly stepped beyond manufacture of goods and even manufacturing techniques:

In [*Tennessee Eastman Co. v. Canada (Commissioner of Patents)*], [1974] S.C.R. 111, the Court], however, affirmed that "art" was a word of very wide connotation and was not to be confined to new processes or products or manufacturing techniques but extended as well to new and innovative methods of applying skill or knowledge provided they produced effects or results commercially useful to the public. An effort to articulate this broader concept of the term "art" was made by Cattanach J. in *Lawson v. Commissioner of Patents* (1970), 62 C.P.R. 101. In that case a patent was being sought on a new method of describing the boundaries of a plot of land. The application was rejected, again not because the subject-matter of the application was not an "art" within the meaning of the definition in the Act but because, like the new use for the adhesive in *Tennessee Eastman*, it related to professional skills

rather than to trade, industry or commerce. In the course of his reasons Mr. Justice Cattanach said at pp. 109-10;

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

In the earlier development of patent law, it was considered that an invention must be a vendible substance and that unless a new mode of operation created a new substance the invention was not entitled to a patent, but if a new operation created a new substance the patentable invention was the substance and not the operation by which it was produced. This was the confusion of the idea of the end with that of means. However, it is now accepted that if the invention is the means and not the end, the inventor is entitled to a patent on the means.

At 554-555

[52] There are thus three important elements in the test for art as articulated by Wilson J.: i) it must not be a disembodied idea but have a method of practical application; ii) it must be a new and inventive method of applying skill and knowledge; and iii) it must have a commercially useful result: *Progressive Games, Inc. v. Canada (Commissioner of Patents)*, 177 F.T.R. 241 (T.D.) at para. 16, aff'd (2000), 9 C.P.R. (4th) 479 (F.C.A.).

[51] Broadly speaking, each of the three elements of “art” as set out in paragraph 52 of Justice Phelan’s reasons are grounded in the provisions of the *Patent Act* in the sense that they reflect the statutory requirements of novelty, utility, non-obviousness, and the prohibition on the granting of a patent for a mere scientific principle or abstract theorem.

[52] According to the Commissioner's reasons for refusing to grant Amazon's application for a patent for its one-click method of internet shopping, the invention fails three tests that the Commissioner found to be implicit in the meaning of "art" for purposes of the *Patent Act*: (1) it does not add to human knowledge anything that is technological in nature; (2) it is merely a business method and a business method is not patentable; and (3) it does not cause a change in the character or condition of a physical object.

[53] In my respectful view, the Commissioner should be wary of devising or relying on tests of the kind set out in the previous paragraph, even if they are intended only to summarize principles derived from the jurisprudence interpreting some aspect of the statutory definition of "invention". The focus should remain on the principles to be derived from the jurisprudence. Catch phrases, tag words and generalizations can take on a life of their own, diverting attention away from the governing principles.

[54] Of course, the Commissioner must consider all relevant jurisprudence, but must also recognize that each decided case turns on its own facts and arises in the context of the state of knowledge at a particular point in time, with the objective of resolving a particular disagreement between the parties to the litigation. Such contextual factors necessarily mean that caution should be exercised in developing a principle derived from a specific decided case and extrapolating it to another case. For example, one must take care not to apply a jurisprudential principle in a way that forecloses the possibility that new knowledge has rendered conventional ideas obsolete.

[55] With these considerations in mind, I turn to the three tests the Commissioner applied in determining the question of patentable subject matter.

(a) Must patentable subject matter be scientific or technological in nature?

[56] Justice Phelan found this question to be unclear and confusing. I agree, and I find little in the Commissioner's reasons to assist my understanding. It is not clear to me what the Commissioner means by the word "technological". Nor do I understand why the Commissioner concluded that Amazon's one-click method of internet shopping, which seems to me to be a technological solution to a practical problem, is not "technological" in nature. This is an example where the use of a tag word may represent an unhelpful distraction.

[57] I also agree with Justice Phelan that if the ambit of this principle is as vague as it appears, it is likely to be highly subjective and unpredictable in its application. In my view, this test should not be used as a stand-alone basis for distinguishing patentable from non-patentable subject matter.

[58] The Attorney General of Canada suggests that the phrase "scientific or technological in nature" was used by the Commissioner to describe the well understood classes of patentable subject matter as distinguished from the fine arts or works of art that are inventive only in an artistic or aesthetic sense, and are therefore not patentable subject matter. If that is what the Commissioner had in mind, then the Commissioner is correct. However, that point could have been made more plainly.

(b) Can a business method ever be patentable subject matter?

[59] The Commissioner answered this question in the negative, but Justice Phelan disagreed. He observed (at paragraph 67 of his reasons) that although a mere business scheme with no practical embodiment will be considered to be an abstract idea or theorem and will therefore be non-patentable, the patent claims in issue describe a business method that has a practical application.

[60] Justice Phelan also said, at paragraph 61 of his reasons, that there is “no basis for the Commissioner’s assumption that there is a ‘tradition’ of excluding business methods from patentability in Canada”. I agree that no Canadian jurisprudence determines conclusively that a business method cannot be patentable subject matter. The Attorney General of Canada has not argued otherwise, and has not denied that the Commissioner has granted patents for claims similar to this in issue in this case.

[61] However, it does not necessarily follow, as Justice Phelan seemed to suggest, that a business method that is not itself patentable subject matter because it is an abstract idea becomes patentable subject matter merely because it has a practical embodiment or a practical application. In my view, this cannot be a distinguishing test, because it is axiomatic that a business method always has or is intended to have a practical application. And in this case, the difficulty with a bare “practical application” test for distinguishing patentable from unpatentable business methods is highlighted because the particular business method – itself an abstract idea – is realized by programming it into the computer by means of a formula or algorithm, which is also an abstract idea.

[62] *Schlumberger* exemplifies an unsuccessful attempt to patent a method of collecting, recording and analyzing seismic data using a computer programmed according to a mathematical formula. That use of the computer was a practical application, and the resulting information was useful. But the patent application failed for want of patentable subject matter because the Court concluded that the only novel aspect of the claimed invention was the mathematical formula which, as a “mere scientific principle or abstract theorem”, cannot be the subject of a patent because of the prohibition in subsection 27(8).

[63] It is arguable that the patent claims in issue in this case could fail on the same reasoning, depending upon whether a purposive construction of the claims in issue leads to the conclusion that *Schlumberger* cannot be distinguished because the only inventive aspect of the claimed invention is the algorithm – a mathematical formula – that is programmed into the computer to cause it to take the necessary steps to accomplish a one-click online purchase. On the other hand, it is also arguable that a purposive construction of the claims may lead to the conclusion that *Schlumberger* is distinguishable because a new one-click method of completing an online purchase is not the whole invention but only one of a number of essential elements in a novel combination. In my view, the task of purposive construction of the claims in this case should be undertaken anew by the Commissioner, with a mind open to the possibility that a novel business method may be an essential element of a valid patent claim.

(c) Must a patentable art cause a change in the character or condition of a physical object?

[64] The Commissioner concluded that a patentable art must cause a change in the character or condition of a physical object. That conclusion is based on paragraph 30 of the decision of the Exchequer Court in *Lawson v. Canada (Commissioner of Patents)* (1970), 62 C.P.R. 101, [1970] Ex. C.J. No. 13 (QL) (F.C.), which reads as follows:

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

[65] Justice Phelan agreed in part, but he gave what I will call the “physicality requirement” a meaning that was much different, and much broader, than the meaning the Commissioner apparently had in mind.

[66] Justice Phelan began his discussion of this point, at paragraph 53 of his reasons, where he said that the “practical application” requirement in *Shell Oil* “ensures that something which is a mere idea or discovery is not patented – it must be concrete and tangible. This requires some sort of manifestation or effect or change of character”. Justice Phelan is here acknowledging that because a patent cannot be granted for an abstract idea, it is implicit in the definition of “invention” that patentable subject matter must be something with physical existence, or something that manifests a discernible effect or change. I agree.

[67] However, I do not necessarily accept the remainder of paragraph 53 of Justice Phelan's reasons, which reads as follows:

However, it is important to remain focused on the requirement for practical application rather than merely the physicality of the invention. The language in *Lawson* must not be interpreted to restrict the patentability of practical applications which might, in light of today's technology, consist of a slightly less conventional "change in character" or effect that through a machine such as a computer.

[68] If these statements are meant to suggest that our understanding of the nature of the "physicality requirement" as described in paragraph 66 above may change because of advances in knowledge, then I would agree. Nothing in the jurisprudence excludes such a possibility.

[69] However, if it is meant to suggest that this "physicality requirement" can be met merely by the fact that the claimed invention has a practical application, then I do not agree. The issue, in my view, is similar to the issue raised in the context of the patentability of business methods in that it requires consideration of *Schlumberger*. The claims in *Schlumberger* were not saved by the fact that they contemplated the use of a physical tool, a computer, to give the novel mathematical formula a practical application. As explained above, the claims in issue in this case may or may not be distinguishable from the claims in *Schlumberger*, depending upon how they are construed.

(3) How should the claims be construed?

[70] Justice Phelan's rejection of the Commissioner's three tests for determining the existence of an art that is patentable subject matter led him to consider anew the question of patent construction.

He stated his construction of the patent claims at paragraphs 73 to 76 of his reasons, which read as follows:

[73] The Court finds that a purposive construction of the “system claims” (e.g. claim 44 and its associated dependant claims) clearly discloses a machine which is used to implement [Amazon’s] one-click ordering system. The described components (e.g. a computer) are essential elements in implementing an online ordering process. This is not merely “a mathematical formula” which could be carried on without a machine or simply a computer program. A machine is patentable under s. 2 of the *Patent Act*. The Commissioner herself found that “in form” the claims disclosed such an invention; it was only when she took a second step to subjectively consider the “substance” that she found otherwise. As discussed, this is unsupported in law. The Court therefore finds the machine claims to be patentable subject matter.

[74] Turning to the process claims, the Commissioner clearly erred by “parsing” the claims into their novel and obvious elements in order to assess patentability. When viewed as a whole it is clear that the claimed invention is a process which uses stored information and ‘cookies’ to enable customers to order items over the internet simply by ‘clicking on them’. It is accepted that the “one-click” method is novel; the Court finds that an online ordering system which facilitates this adds to the state of knowledge in this area.

[75] The new learning or knowledge is not simply a scheme, plan or disembodied idea; it is a practical application of the one-click concept, put into action through the use of cookies, computers, the internet and the customer’s own action. Tangibility is not an issue. The “physical effect”, transformation or change of character resides in the customer manipulating their computer and creating an order. It matters not that the “goods” ordered are not physically changed.

[76] It is undisputed that this invention has a commercially applicable result and is concerned with trade, industry and commerce. Indeed, its utilization in this very realm seems to be at the root of the Commissioner’s concern.

[71] As I understand Justice Phelan’s construction of claims 1 and 44, he adopted what is essentially a literal construction, based on his conclusion that the requirement of physical existence

or manifestation of a discernible effect or change implicit in the statutory definition of “invention” was met because the use of a computer is an essential element of the claim.

[72] In my respectful view, it was not appropriate for Justice Phelan to undertake his own purposive construction of the patent claims on the basis of the available record in this case. No doubt Amazon urged Justice Phelan that if he found the Commissioner’s analysis to be wrong in law, he should reverse the Commissioner’s decision and order the Commissioner to issue the patent. No doubt Justice Phelan was acutely aware, as am I, that this matter has already awaited resolution for many years. Nevertheless, for the following reasons I prefer not to adopt Justice Phelan’s construction. Instead, I would refer the construction of the patent claims back to the Commissioner for re-examination.

[73] Anyone who undertakes a purposive construction of a patent must do so on the basis of a foundation of knowledge about the relevant art, and in particular about the state of the relevant art at the relevant time. For the Commissioner, that assistance comes in the form of submissions from the patent applicant and, I assume, from staff at the patent office with the appropriate experience. Courts, however, generally require the expert evidence of persons skilled in the art (*Whirlpool* at paragraph 49).

[74] On those rare occasions when a court is required to construe a patent claim without expert assistance, the result necessarily is limited to a literal interpretation of the claims, which may not be well informed. In this case, Justice Phelan did not have the benefit of expert evidence about how

computers work and the manner in which computers are used to put an abstract idea to use. The reasons of the Board have some language that touches on those issues, but the Board's comments are made in the context of a particular view of the relevant legal principles that are wrong in some critical respects. I am unable to discern from the record what the Commissioner would have concluded about the patentability of the claims in issue based on the correct principles.

Conclusion

[75] For these reasons I would allow the appeal. I would award no costs as none have been sought. I would set aside the judgment of the Federal Court and replace it with a judgment that allows Amazon's appeal of the Commissioner's decision and requires the Commissioner to re-examine the patent application on an expedited basis in accordance with these reasons.

“K. Sharlow”

J.A.

“I agree
Johanne Trudel J.A.”

“I agree
David Stratas J.A.”

FEDERAL COURT OF APPEAL

NAMES OF COUNSEL AND SOLICITORS OF RECORD

DOCKET: A-435-10

(APPEAL FROM AN ORDER OF THE HONOURABLE MR. JUSTICE PHELAN DATED OCTOBER 14, 2010, DOCKET NO. T-1476-09)

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STRATAS J.A.

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