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(T-1476-09)

FEDERAL COURT OF APPEAL

BETWEEN:

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

Appellants

- and -

AMAZON.COM, INC.

Respondent

APPELLANTS' MEMORANDUM OF FACT AND LAW

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APPELLANTS' MEMORANDUM OF FACT AND LAW

OVERVIEW

1. This case involves the most fundamental principles of patent law. Patents developed centuries ago as a limited exception to the general prohibition of monopolies, which had long been recognized to be undesirable. The exception was permitted because, rather than *restrain* trade, as a monopoly does, the inventions for which patents were granted were thought to *expand* trade, to the benefit of the public interest. Over time, the characteristics that identify an invention meriting that exception, so as to justify the granting of a limited monopoly in the public interest, have become codified in legislation and jurisprudence. The most elemental of these characteristics are now articulated in the statutory definition of a patentable "invention".
2. The Respondent did not invent anything that satisfies the definition that Parliament has specified for a patentable invention. To qualify for a patent monopoly, the Respondent must have invented more than a sequence of instructions by which known elements are used to process information. In allowing a customer to order goods by pressing a single button, the sequence of instructions might very well present advantages over traditional online ordering. But even so, it cannot be considered a "machine, manufacture or composition of matter" nor an "art" or a "process", as those terms are intended in the definition of "invention". It is no more than a plan or scheme.
3. Accordingly, the Respondent did not invent anything that is at law an "invention" warranting the grant of a monopoly. The Commissioner correctly refused the patent application. The Federal Court erred by making too broad both the interpretation of the statutory definition of a patentable "invention", and the characterization of what the Respondent actually invented, for the purpose of determining whether it fell within that definition.

I. FACTS

BACKGROUND

4. The Respondent operates a website where items it offers for sale are listed and described. Its goods are usually ordered by its customers online from its website. In September 1998, the Respondent submitted Canadian Patent Application No. 2,246,933¹, entitled "Method And System For Placing A Purchase Order Via A Communication Network".² After a number of amendments to the claims, the Examiner rejected the application, for both obviousness and non-patentable subject matter. The Respondent disagreed and appeared before a panel of the Patent Appeal Board. In a final decision rendered March 4, 2009, the Commissioner adopted the recommendation of the panel, making its report the reasons for her decision.³

THE "INVENTION" AT ISSUE

5. The application has 75 claims. Claims 44 to 50 are drafted as "system" claims, while the others are drafted as "method" claims. For present purposes, the parties agree that at issue are the two independent claims, Claim 1 and Claim 44⁴, which represent the "method" claims and the "system" claims, respectively. As the Court noted⁵, the remainder of the claims are variations on the themes articulated in Claims 1 and 44.

6. For ease of reference and comparison, Claims 1 and 44 may be set out as follows.

¹ Appeal Book Volume 3, pages 671 to 723

² ¶4, Reasons for Judgment of Phelan J., Appeal Book Vol. 1, page 7

³ ¶8, Reasons for Judgment of Phelan J., Appeal Book Vol. 1, page 9

⁴ set out in ¶6, Reasons for Judgment of Phelan J., Appeal Book Vol. 1, page 8

⁵ ¶7, Reasons for Judgment of Phelan J., Appeal Book Vol. 1, page 9

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.

7. Before placing an order by using the applicant's invention, a customer

must first use a computer and the Internet to visit the vendor's website and enter "purchaser-specific account information": customer identification, customer billing information (e.g. a credit card number) and customer shipping information. That information is sent to the vendor's "server system" via the Internet and is stored by the vendor in its database. The vendor then assigns the customer a client identifier, which the vendor uses to associate the customer's computer with the purchaser-specific account information stored in its database. That identifier is sent by the vendor to the customer, and is persistently stored in the customer's computer as a "cookie". An order cannot be placed by using the applicant's invention unless these steps have first been taken.

8. On a subsequent visit to the website, a displayed item may be selected for purchase, and the applicant's invention can then be employed. To do so, the customer follows the vendor's instruction to perform a "mouse click" on a "button" associated with the chosen item and displayed on the web page. That single click sends the purchase request and the client identifier to the vendor's "server system" via the Internet. After the customer has done so, the vendor's "server system" processes the request and, pursuant to instructions executed at the "server system", associates the client identifier with the customer's purchaser-specific account information and generates the order. What the Respondent actually "invented" here is at issue. As will be shown, it was no more than the idea of associating a client identifier with specific account information on a server, to achieve the business objective of streamlining (by a single action) online shopping.

THE COMMISSIONER'S DECISION

9. The Commissioner overturned the Examiner's finding on obviousness, but upheld the finding that the invention did not constitute patentable subject matter.⁶ Although the use of a "cookie" to track information was known, she found the "inventive

⁶ ¶9 and ¶10, Reasons for Judgment of Phelan J., Appeal Book Vol. 1, pages 9 and 10

concept” – a streamlined (by a single action) online ordering method– to be non-obvious.⁷ As to patentability of the subject matter, the Commissioner noted section 2 of the *Patent Act*⁸, which defines the term “invention”.

"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;

«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.

10. The Commissioner refused the application on the basis that its subject matter was not patentable. Notwithstanding differences in form, the substance of all the claims – “what has actually been discovered”⁹ – was non-technological¹⁰, a business method¹¹, and did not constitute a patentable “art” or “process”. It did not satisfy the test in *Lawson*¹²; that is, it did not rely on “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 condition”.¹³

THE DECISION UNDER APPEAL

11. The Respondent appealed the Commissioner’s decision. Phelan J. quashed the Commissioner’s refusal to grant the patent. He allowed the appeal with respect to the Commissioner’s findings on statutory subject matter, and sent the matter back to the Commissioner for re-examination, with the direction that the application’s claims constitute patentable subject-matter.

⁷ Commissioner’s Decision, ¶101 to ¶102, Appeal Book Vol. 1, pages 133 to 135

⁸ R.S. 1985, c. P-4, as amended

⁹ Commissioner’s Decision, ¶172, Appeal Book Vol. 1, page 156

¹⁰ Commissioner’s Decision, ¶184 to ¶194, Appeal Book Vol. 1, pages 158 to 160

¹¹ Commissioner’s Decision, ¶162 and ¶179, Appeal Book Vol. 1, pages 153 and 157

¹² *Lawson v. Commissioner of Patents* (1970), 62 C.P.R. 101 (Ex. Ct.)

¹³ Commissioner’s Decision, ¶174 to ¶176, Appeal Book Vol. 1, page 156 (see also ¶137 to ¶139, Appeal Book Vol. 1, page 146)

12. The Court did not rule that all business methods are patentable but did find that this one is. The Court ruled that today's Information Age requires a broad test for "art" or "process"; a non-technological business method can be patentable if it satisfies that broader test. In addition, Phelan J. rejected the "form and substance" approach applied by the Commissioner for the determination of patentable subject matter. He found that whether an application concerns patentable subject matter must be "determined with reference to the essential elements as disclosed through purposive construction of the claims." His broader identification of the subject matter of the invention fell within his broader formulation of the test for patentable subject matter. As will be seen, Phelan J. erred in respect of both of these factors.

The "Form and Substance" Approach

13. The Court's findings apparently hinged on a conclusion that for purposes of determining whether the "invention" was "statutory subject matter," the computerized components were essential elements [¶73 and ¶75]. This conclusion was based on Phelan J.'s determination that the Commissioner was wrong to "parse the claims into their novel and non-novel components in order to evaluate patentability." [¶42] The Court found that "it is contrary to settled law to purport to look at 'what has been invented' and 'substance' by failing to look at the invention as a whole." [¶43] Phelan J. noted the following:

Although the Commissioner attempts to confine this analysis to patentable subject matter, a return to 'form and substance' language, no matter what the context, is confusing and unnecessary. [¶39]

It is thus not wrong to speak of "what has been invented" so long as this is determined with reference to the essential elements as disclosed through purposive construction of the claims, rather than through a subjective, secondary consideration by the Patent Office as to the "substance of the invention." [¶40]

14. On this same basis, Phelan J. apparently distinguished the present case

from *Schlumberger*¹⁴, which the Appellants had argued was authority for the principle that, when determining patentable subject matter, it is necessary to determine what “has been discovered”. He ruled that in *Schlumberger* the Court found as it did because – unlike the present case – it did not consider a computer to be an “essential element” of the invention.

The Definition of “Art” or “Process”

15. The Appellants argued that the invention must satisfy the test in *Lawson*, which the Court referred to as the “physical manipulation” test. Phelan J. stated the “crux of the debate” as follows: did the Commissioner err in interpreting *Shell Oil*’s requirement of “practical application” as requiring a “change of character or condition in a physical object?” [¶49] Citing *Shell Oil*¹⁵, *Progressive Games*¹⁶, *Harvard Mouse*¹⁷ and *Bilski*,¹⁸ Phelan J. expanded the test in *Lawson*. He relied primarily on the “three important elements in the test for art as articulated by Wilson J.” in *Shell Oil* [¶52], and particularly on the first element: “it must not be a disembodied idea but have a method of practical application.”

The practical application requirement 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. 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 through a machine such as a computer. [¶53]

16. Phelan J. supported this expansion first by noting that the *Lawson* test is forty years old. [¶51], and went on to note that the *Patent Act* “. . . must be applied in ways that recognize changes in technology such as the move from the industrial age to

¹⁴ *Schlumberger Canada Ltd. v. Canada (Commissioner of Patents)*, [1982] 1 F.C. 845 (C.A.); application for leave to appeal dismissed, [1981] S.C.C.A. No. 56

¹⁵ *Shell Oil Co. v. Canada (Commissioner of Patents)*, [1982] 2 S.C.R. 536

¹⁶ *Progressive Games, Inc. v. Canada (Commissioner of Patents)*, 177 F.T.R. 241 (T.D.), aff’d (2000), 9 C.P.R. (4th) 479 (F.C.A.)

¹⁷ *Harvard College v. Canada (Commissioner of Patents)*, 2002 SCC 76

¹⁸ *Bilski v. Kappos* (2010), 130 S.Ct. 3218 (U.S.S.C.)

the electronic one of today”. [¶54]

17. He also cited the very recent decision of the United States Supreme Court in *Bilski*, stating that the Court “rejected the type of physicality advocated by the Commissioner.” [¶55] He quoted from that case to the effect that the U.S. equivalent of the *Lawson* test is sufficient when considering “processes similar to those in the Industrial Age – for example, inventions grounded in a physical or other tangible form. But there are reasons to doubt whether the test should be the sole criterion for determining the patentability of inventions in the Information Age.” [¶55] In addition, he noted the Australian decision in *Grant*¹⁹ and its reference to “a change in state or information in a part of a machine”. [¶57]

18. Thus, the Court apparently ruled that a patentable art or process must still produce a change in character or effect, but that change need not be “physical” in the sense that would have been understood in Industrial times. Accordingly, he found the Commissioner’s interpretation of *Lawson* and *Shell Oil* too narrow. Phelan J. then found the Respondent’s “one-click” method to be a patentable art or process. [¶74 to ¶77] He found it is not merely “a scheme, plan or disembodied idea.” Rather, the required “physical effect, transformation or change of character resides in the customer manipulating their computer and creating an order.” [¶75]

The System Claims

19. Phelan J. found that the “system” claims disclosed a machine. He suggested that, when determining patentable subject matter, one cannot exclude from the invention “described components (e.g. a computer) [that] are essential elements in implementing an online ordering process”. [¶73] As noted above, on his analysis, the Commissioner’s “form and substance approach” was not supportable [¶38 to ¶47].

¹⁹ *Grant v. Commissioner of Patents* [2006] FCAFC 120

Non-Technological/Business Methods

20. The Court found nothing in Canadian law that would require a business method *per se* to be excluded from patentable subject matter. As well, the Court found no articulation in Canadian law of a test requiring that an invention be technological in nature. The Court did, however, acknowledge that some rationale for a technological requirement could be gleaned from the language in the *Patent Rules* and Canadian jurisprudence.[¶70]

II. ISSUES

21. The issue at the root of this appeal is whether Phelan J. erred in concluding that what the Respondent invented is patentable subject matter as defined in section 2 of the *Patent Act*.

22. To determine that issue, the Appellants submit as follows:

- a. First, the Court must answer a fundamental question: What, within the scope of the claims, has the Respondent actually invented?
- b. Second, the Court must decide whether the Respondent's actual invention falls within the statutory definition of a patentable "invention".

III. SUBMISSIONS

23. On the first question, the Appellants submit that Phelan J. erred in his characterization of the Respondent's invention for the purpose of determining whether it fell within the statutory definition.

- a. He erred in not applying, for that purpose, the "actual invention" analysis, alternatively expressed in binding jurisprudence²⁰ as the "what has been

²⁰ particularly *Schlumberger* and *Shell Oil*, both *supra*

discovered" or "inventive concept" analysis.

b. He erred in characterizing the Respondent's actual invention, as defined by the method claims of the application, such that it fell within the scope of the statutory terms "art" and "process".

c. He erred in characterizing the Respondent's actual invention, as defined by the system claims of the application, such that it fell within the scope of the statutory term "machine".

24. On the second question, the Appellants submit that Phelan J. erred in his interpretation of the statutory definition of "invention", as follows.

a. He erred in construing the terms "art" and "process" so broadly as to include the Respondent's actual invention, as defined by the method claims of the application.

- In particular, he erred in finding that the terms "art" and "process" are not limited to 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 condition.

b. He erred in construing the term "machine" so broadly as to include the Respondent's actual invention, as defined by the system claims of the application.

c. He erred in finding that an "invention" as defined need not display a technological aspect.

STANDARD OF REVIEW

25. In respect of both the decision of the Commissioner and the decision under appeal, the appropriate standard of review would appear to be correctness.²¹

²¹ see e.g. *Harvard Mouse, supra*; *Bayer Schering Pharma Aktiengesellschaft v. Canada (Attorney General)*, 2010 FCA 275

HISTORY AND FUNDAMENTAL PRINCIPLES

26. This case involves the most fundamental principles of patent law, and a brief review of their origins is essential to their application to this case. Such a review makes it clear that the Appellants' approach to evaluating the subject matter as non-patentable is solidly grounded.

27. Early letters patent were essentially authority, usually issued by the reigning monarch to a particular person, to operate a specified business or trade as a monopoly. It was recognized, however, that such authority must be limited by law.²² Cases like the famous "Case of Monopolies"²³ of 1602 demonstrated two important points: that trade monopolies were generally contrary to the public interest, but that certain exceptions, if they actually benefitted the public interest, should be countenanced. Accordingly, Britain enacted its first statutory expression of a patent law in the *Statute of Monopolies* of 1623. It firmly abolished all monopolies, but did recognize one exception: letters patent granted to the inventors of "new manufactures".

28. At that time, no attempt was made to define explicitly the kinds of things that would qualify for this exception, beyond the reference to "new manufactures". Over time, however, the Courts came to articulate it in greater detail. Of particular note, the judgments – and Letters Patent themselves – did use the words "art" and "process", generally as referring to a contribution to the manufacture of some material thing, as in "... the art of making of cards ..."²⁴.

29. Patent law was not legislatively codified in Great Britain until the mid-1800s. By that time, the United States had enacted a patent statute (in 1790), as had the

²² For a brief discussion, see *Eli Lilly Canada Inc. v. Apotex Inc.*, 2008 FC 142, ¶65 to ¶67 (per Hughes J.)

²³ *Darcy v. Allin* (1602), Noy 178 [reproduced at 1 Web. Pat. Cas. 1]

²⁴ *Darcy v. Allin*, *supra*

legislatures of Lower Canada (in 1823) and Upper Canada (in 1826).²⁵ In the absence of a British model, the wording of the latter two was based on the U.S. statute. Thus, they referred to patents to be granted to the inventors of an “art, machine, manufacture or composition of matter”. The U.S. statute finds its objective in the U.S. Constitution: “to promote the progress of science and the useful arts”. The Canadian statutes, on the other hand, must be understood in the context of the British common law, according to which, it has been noted, the inducement for the grant of a patent was and is “. . . the introduction of a new trade or a new manufacture within the realm.”²⁶

30. The first federal²⁷ *Patent Act* (of 1869) continued to model its wording on the U.S. statute, referring to the grant of a patent for an “art, machine, manufacture, or composition of matter”. A definition of “invention” – which included these words – first appeared in 1886²⁸, though it was not until 1923²⁹ that the definition included a reference to a “process”. According to a leading contemporary text, this addition was made “probably unnecessarily”. As was noted, “The ambit of the five expressions taken together is limited to material objects and methods of producing such objects.”³⁰

WHAT DID THE RESPONDENT ACTUALLY INVENT?

An “Actual Invention” Analysis is Necessary

31. Before considering whether the Respondent’s application may be said to describe a patentable “invention” as intended by the *Patent Act*, the Court must answer

²⁵ see Patents: A Canadian compendium of law and practice, George Francis Takach, 1993, Juriliber Limited, Edmonton, at page 6

²⁶ The Canadian Law and Practice Relating to Letters Patent for Inventions, 4th Edition, Harold G. Fox, 1969, The Carswell Company Limited, Toronto, page 5

²⁷ Section 91(22) of the *Constitution Act, 1867* assigns to Parliament the power to make laws respecting simply “patents of invention and discovery”.

²⁸ R.S.C. 1886, c. 61, s.2

²⁹ 13-14 Geo. V., c. 23

³⁰ Canadian Patent Law and Practice, O. M. Biggar, 1927, Burroughs & Company (Eastern) Limited, Toronto, pages 11 and 12

a fundamental question: What did the Respondent actually invent?

32. The Appellants submit that Phelan J. erred in his approach to answering this question. Essentially, he applied only the claim construction approach described by the Supreme Court in *Whirlpool*³¹, used by the Courts in determining patent validity or infringement. He held that this approach – which, for reasons discussed below, we may call the “framing” analysis – without more, is also adequate in deciding whether a purported “invention” is patentable subject matter.

33. The Appellants, however, submit that the framing analysis without more is not adequate in this case, and that an additional analysis must be performed. Specifically, if part of the purpose is to decide the patentability of subject matter, then as part of the purposive construction of the claim, the Court must also identify the actual invention within the scope of the claim. We may call this the “actual invention” analysis.³²

34. This additional analysis must be conducted primarily because the framing analysis has a particular objective: to “construe the claims so as to determine what exactly lies within the scope of the inventor’s rights”³³, that is, to establish the placement of the “fences” or “boundaries” that frame the field of the patent-holder’s claimed monopoly³⁴. In contrast, identifying the patentable subject matter within the scope of the claim – the actual invention analysis – has a different objective: to verify that what has actually been invented, in terms of patentable subject matter, justifies the public interest exception to the prohibition of monopolies. Both distinct objectives are crucial, as the Supreme Court of Canada recognized³⁵ half a century ago: “. . . the Commissioner should

³¹ *Whirlpool Corp. v. Camco Inc.*, [2000] 2 S.C.R. 1067

³² As noted in the Court below, use of the terms “form” and “substance” to distinguish these steps can lead to confusion, and will be avoided in this memorandum to the extent possible.

³³ *Free World Trust v. Électro Santé Inc.*, [2000] 2 S.C.R. 1024, ¶44 to ¶50, at ¶48

³⁴ *ibid.*, ¶14 to ¶15

³⁵ *Canada (Commissioner of Patents) v. Farbwerke Hoechst AG Vormals Meister Lucius & Bruning*, [1964] S.C.R. 49

most carefully scrutinize the application to see if it merits the grant of monopoly privileges, and to determine the scope of the monopoly available.” [emphasis added] From a practical point of view, if there was to be only a framing analysis and no actual invention analysis, patent applicants would easily be able to circumvent the prohibition against patenting mere plans, schemes or abstract ideas, by merely adding to each claim a reference to a standard known computer or computerized system, and thus render patentable what, under the *Patent Act*, is clearly not patentable.

35. While the claimed scope of the monopoly and the patent applicant’s actual invention will often be the same, they are not invariably so; “the patented invention is not necessarily co-extensive with the patent claims”.³⁶ Indeed: “An inventor is not obliged to claim a monopoly on everything new, ingenious and useful disclosed in the specification.”³⁷ Accordingly, the Courts have implicitly and explicitly recognized that the framing analysis alone may not provide a complete answer where one must identify the “invention” for a different or additional purpose.

36. For example, where the purpose is the determination of the true inventors, it is necessary to identify the actual invention. In *Apotex v Wellcome*³⁸ – where the Court expressed the actual invention as the “inventive concept” – two scientists had played important roles with five other scientists in the invention as framed in the claims. However, they were found to have no responsibility for the inventive concept as identified by the Supreme Court; therefore, unlike the scientists who did, they were not the inventors of the actual invention and were not entitled to share in the patent. The Court explicitly proceeded on the basis that to identify the inventor, “The ultimate question must therefore be: who is responsible for the inventive concept?” [¶96]

37. Where the purpose is the determination of patentable subject matter, an

³⁶*Bristol-Myers Squibb Co. v. Canada (Attorney General)* [2005] 1 S.C.R. 533 at ¶ 52, citing *Monsanto Canada Inc. v. Schmeiser*, 2004 SCC 34.

³⁷ ¶42, *Whirlpool, supra*

³⁸ *Apotex Inc. v. Wellcome Foundation Ltd.*, 2002 SCC 77

important 1964 decision of the Supreme Court demonstrated the need to conduct further analysis to identify the actual invention within the claim. In *Farbwerke Hoechst*³⁹, the applicant claimed a diluted version of a known chemical composition. As a substance, the chemical composition was not patentable subject matter, because section 41 of the Act at that time excluded from patentability⁴⁰ any composition that was (1) intended for use as a medicine and (2) produced by a chemical process.

38. The patent had been denied by the Commissioner. On appeal, the Exchequer Court found that the claimed invention, being produced by dilution, was not produced by a chemical process and therefore formally escaped the exclusion of section 41. The Commissioner's analysis, though, had proceeded beyond that framing analysis. He had concluded that to determine patentable subject matter, he had to identify the "essential inventive feature" of the claims, which he found to be the undiluted chemical composition. Dilution was an essential element of the invention as framed, but should not be considered essential to the actual invention, namely the undiluted chemical composition. Though the invention as framed escaped the exclusion of section 41, the actual invention – expressed by the Commissioner (in language approved by the Court) as the "inventive feature" – did not. The Commissioner had therefore concluded that the actual invention was not patentable subject matter.

39. The Supreme Court reversed the decision of the Exchequer Court and agreed with the Commissioner's finding and reasons.⁴¹ The Supreme Court used the terms "form" and "substance" to distinguish between the invention as framed by the claims and the actual invention, and stressed the importance of making the distinction: "The decision under appeal is of extreme practical significance. It gives effect to form

³⁹ *supra*

⁴⁰ except as produced by a particular described process, such patent being referred to as "process-dependent"

⁴¹ It should be noted that both the Supreme Court and the Commissioner would have denied the patent on an additional ground: the composition had already been patented (in process-dependent form), and its dilution was not sufficiently inventive to overcome the rule against double-patenting.

rather than substance.” Thus, the “invention” as defined by the framing analysis was patentable, while the “invention” as defined by an actual invention analysis was not. In the result the Supreme Court confirmed that the patent was properly denied.

40. The opposite side of the same coin was demonstrated in the Supreme Court’s seminal 1982 decision in *Shell Oil*⁴², where the claims were directed simply to chemical compositions. Clearly, a chemical composition falls within the category “composition of matter” in the definition of “invention”, but these compositions, simple mixtures of known compounds with adjuvants (carriers), were not themselves considered patentable.⁴³ Since the applicant had actually discovered a new use for the known compounds, the Court put the matter for consideration as follows:

In my view, this is the thrust of the appellant’s appeal to this court. It says: I recognize that these compounds are old; I acknowledge that there is nothing inventive in mixing them with these adjuvants once their properties as plant growth regulators have been discovered; but I have discovered these properties in those old compounds and I want a patent on the practical embodiment of my invention.⁴⁴

41. It was in this context that the Court determined that the actual invention – which the Court expressed as what “[t]he applicant has discovered” [¶22] – was “that known chemical compounds revealed a previously unrecognized use as plant growth regulators”⁴⁵. Thus, the actual invention was carefully identified by the Court, by an analysis that went beyond the framing analysis. The Court allowed the patent. In other words, in *Shell Oil* the invention as framed by the claims was not patentable without consideration of the actual invention within the scope of the claim, which was patentable. As a result, the Supreme Court ruled that the patent was to be granted.

42. In short, as shown particularly by the Supreme Court’s decisions in *Farbwerke Hoechst* and *Shell Oil*, when the issue concerns patentable subject matter, the

⁴² *supra*

⁴³ in view of the Court’s earlier holding in *Farbwerke Hoechst*

⁴⁴ *Shell Oil, supra* at page 13 (QL)

⁴⁵ as described by Binnie J. in *Apotex v Wellcome, supra* at ¶48

approach to claim construction applied in infringement and validity cases may not provide a complete answer; further analysis is required. In some cases⁴⁶, the scope of the claimed monopoly coincides with the actual invention. In other cases – including the present one – there may be a difference between them which must be taken into account. Where the language of the claims does not coincide with what has been discovered by the inventor – the actual invention – the question of patentable subject matter must be addressed by also determining the actual invention that falls within the claims.

43. Like purposive construction generally, an actual invention analysis must take the entire context into account. For example, in *Apotex Inc. v. Sanofi-Synthelabo* – where the Court expressed the actual invention as the “inventive concept” – the analysis required consideration of other parts of the patent application, and not just of the claims: “The inventive concept of the claims is not readily discernable from the claims themselves.”⁴⁷

The Essential Elements May Differ

44. In purposive construction, the characterization of an element as “essential” is guided by the purpose of the characterization, and the framing analysis and the actual invention analysis have different purposes. Where the actual invention analysis is to be performed, there must be particular concern for whether an element plays a fundamental and integral role in achieving what the patent applicant actually invented. Thus, the essential elements of the invention as framed may differ from the essential elements of the actual invention. (That this is the case is apparent when one considers, as examples, that a claim may cover more than one actual invention, and that, as noted, the actual invention and the claimed invention need not be co-extensive.)

⁴⁶ such as *Harvard College, supra*

⁴⁷ ¶77, *Apotex Inc. v. Sanofi-Synthelabo Canada Inc.*, 2008 SCC 61, where a determination of non-obviousness was at issue

45. The need to recognize such differences arises at least in part from the fact that the wording of a claim is chosen by the applicant. In construing a claim to adjudicate infringement, the intent of the applicant is a key factor in determining what is essential to defining the scope of the claimed monopoly. Indeed, when an inventor clearly considers an element to be essential to the invention as framed, a court cannot decide otherwise.⁴⁸

46. Both *Farbwerke Hoechst* and *Shell Oil* show conclusively that reliance on the essential elements of the invention as framed – that is, the scope of the monopoly claimed by the patent applicant – can be misleading where patentability of subject matter is the issue. In particular, it could effectively render patentable that which is truly unpatentable⁴⁹, and vice-versa. The way to avoid that, as these decisions show, is to consider, for the purpose of determining patentable subject matter, only the elements which cooperate together to achieve the actual invention, whether or not they are essential to the invention as framed. For example, in *Farbwerke Hoechst* the claim was for a dilution of a chemical composition. In identifying the actual invention, the Commissioner, as approved by the Supreme Court, disregarded the dilution element because it played no special part in it, even though it was essential to the invention as framed.

Practically all new medicines must be diluted with some carrier or other ingredient, and cannot be used in the pure form. . . In this case there is no question of second invention involving the discovery of a new and particular carrier which imparts a special, new, and unexpected character to the compositions.⁵⁰

47. Virtually all of these considerations were at least implicitly applied by this Court in 1981 in *Schlumberger*⁵¹. There, the application involved a means for facilitating exploration for oil and gas, which was normally done by drilling boreholes through

⁴⁸ ¶31 and ¶59, *Free World Trust (supra)*

⁴⁹ This concept was further explained in *In re Patent Applications GB 0226884.3 and 0419317.3 by CFPH L.L.C.*, [2005] EWHC 1589 (Pat), esp. at ¶35 to ¶37

⁵⁰ as quoted in *Shell Oil, supra* at page 7 (QL)

⁵¹ *supra*

geological formations, and passing instruments up and down those boreholes to effect various measurements of the soil characteristics. The applicant had designed a process whereby the measurements were recorded on magnetic tapes, transmitted to a computer programmed according to the mathematical formulae set out in the specifications, and converted by the computer into useful information produced in human readable form. The invention as framed by the applicant's claims was described by the Court as follows.

¶4 . . . a process whereby a series of calculations are performed mechanically so as to extract useful information from some measurements. In order for the invention to be put into practice, it is, of course, necessary to program computers. But the invention, it is said, is not the computer program, it is the complex process, which is effected by computer, of transforming measurements into useful information.

48. The Court appears to have considered the computer to be an essential element of the invention as framed – “the invention . . . is the process . . . effected by computer” – but the Court made it clear that in determining patentable subject matter, the proper approach was to identify what “has been discovered” (which courts have also expressed as the “inventive concept” and which is expressed in this memorandum simply as the “actual invention”). The Court did not include the computer in the actual invention, because there was “nothing new in using computers to make calculations of the kind that are described by the specification”; the computer did not contribute to the actual invention. On that analysis, the actual invention, the “discovery of various calculations to be made and of the mathematical formulae to be used in making those calculations”, did not constitute patentable subject matter.

¶5 In order to determine whether the application discloses a patentable invention, it is first necessary to determine what, according to the application, has been discovered. Now, it is obvious, I think, that there is nothing new in using computers to make calculations of the kind that are prescribed by the specifications. . . What is new here is the discovery of the various calculations to be made and of the mathematical formulae to be used in making those calculations. If those calculations were not to be effected by computers but by men, the subject-matter of the application would clearly be mathematical formulae and a series of purely mental operations; as such, in my view, it would not be patentable. . . However, in the present case, the specifications prescribe that the calculations be made by computers. . . If the appellant's contention were correct, it would follow that the mere fact that the use of computers is prescribed to perform the calculations prescribed in the specifications, would have the effect of transforming into patentable subject-matter what would, otherwise, be clearly not patentable. . . This, in

my view, is unacceptable. . . . This is not, in my view, an invention within the meaning of section 2. [emphasis added]

49. Thus, Phelan J. erred in identifying the invention, to determine whether it is patentable subject matter, by applying only the claims construction approach used for adjudicating infringement and validity. Determining patentable subject matter requires instead a holistic consideration of the actual invention. All elements (both old and new) that contribute to the actual invention must be considered in their totality and it would indeed be improper to parse the actual invention into its novel and non-novel elements. However, an element in the claim that does not contribute to the actual invention – that does not (as approved by the Supreme Court in *Farbwerke Hoechst*) “impart a special, new, and unexpected character” to it – must be disregarded. In other words, Phelan J. should have used the additional actual invention analysis, as exemplified by *Farbwerke Hoechst*, *Schlumberger*, and *Shell Oil*, and as applied below.

The Respondent’s Actual Invention

50. Claim 1 is framed as a “method”, while claim 44 is framed as a “system”. However, when these claims – in light of the application as a whole – are examined, it can be readily seen that only one actual invention is revealed. Indeed, Phelan J. came very close (at ¶74) to properly identifying what the applicant actually invented. He found: “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’.”

51. However, he erred when, at ¶75, he failed to disregard the use of cookies, the computers, the Internet, and the customer’s own action in order to identify the actual invention; he failed to recognize “that there is nothing new in using computers”, the Internet, and the customer’s own action to enable customers to order items via the

Internet. As a result, he misapplied the test for patentable subject matter, having both mischaracterized what the patent applicant actually invented and, at ¶58, having failed to apply the test for patentable subject matter to the actual invention. He ruled – incorrectly, it is submitted – that the test could be satisfied by the invention as framed by the claims. That is, though he decided that “for something to show practical application it must manifest in some way so that it is no longer simply a scheme or idea”, he erred when he ruled that “this does not mean that the ‘physical effect’ – whatever it may be – must be of the inventive concept itself” [¶58] and that a relevant “‘physical effect’, transformation or change of character resides in the customer manipulating their computer and creating an order.”[¶75]

52. At the time of this application, it was common for customers to select and order goods via the Internet using a computer. Indeed, the patent application itself describes the common “shopping cart” model, in which “when the purchaser selects an item from the electronic catalog, the server computer system metaphorically adds that item to a shopping cart.”⁵² The actual invention here is a scheme, plan or series of instructions that when implemented achieves the result of streamlining the previously well-known process for online shopping. Disregarding the non-essential elements – those that are not required to achieve what the applicant actually invented – it can readily be seen that the essential elements of the actual invention are: (a) using a client identifier to associate information previously stored on a server with a specific customer so that the customer can order an item (b) by a single action without having to log in to the server or re-enter the previously stored information.

53. It is clear that the other elements of the claims involved in the operation of the invention as framed do not cooperate together to achieve what the patent applicant actually invented. These other elements, namely, the use of cookies, computers, the

⁵² see “Background of the Invention”, Patent Application, Appeal Book Volume 3, pages 672 to 673B, esp. line 10, page 673A

internet and human behaviour, were known elements of on-line shopping and they operate for the purposes of the claimed invention just as they have previously been designed to do. The applicant did not invent the use of a client system first to receive a cookie from a server system, and then to send that cookie back to the server in response to a single action.⁵³ For example, cookies had commonly been used by vendors to create personalized webpages, by using client identifiers to associate previously stored information with a specific customer, so that the website would feature items that a user had shown interest in during a previous visit. Clearly, the patent applicant did not invent the idea of using a cookie to associate information about a customer stored upon a previous visit to achieve a business objective. What the patent applicant actually invented here was the idea of associating a client identifier with specific account information on a server (the client's address for delivery, a credit card number, etc.) to achieve the business objective of streamlining online shopping.

54. Thus, as in *Schlumberger*, although the application claims the use of standard known computers [and computerized systems and components] to carry out its actual invention, these do not contribute to the actual invention itself. Indeed, the computers and computerized components in this case are analogous to the use of computers to make calculations in *Schlumberger*, to the "dilution" of the compositions in *Farbwerke Hoechst*, and to the compositions in *Shell Oil*. Those elements of the inventions as framed by the claims were distinguished from the actual invention for the purpose of determining patentable subject matter. For that purpose, Phelan J. should have disregarded the computers, the use of cookies, the Internet, and the customer's own actions.

55. That this is correct is emphasized by consideration of Claim 44. Phelan J.'s finding that the reference to computerized systems in that claim qualifies the

⁵³ Commissioner's Decision, ¶59, Appeal Book Volume 1, page 123

invention as a “machine” surely represents the kind of triumph of form over substance that the Supreme Court explicitly warned against in *Farbwerke Hoechst*. If one were to treat the machine itself as being the actual invention, it would clearly not be a patentable invention; it would be lacking in novelty and be obvious, bearing in mind that at the relevant date any conventional general purpose computer would have been capable of carrying out the instructions set out in claim 44. In this regard, if one were to treat the machine-related elements in claim 44 as being part of the actual invention, it would be important to take into consideration that the machine-related elements referred to in claims 1 and 44 are limited to elements in a client system and do not include any elements of the server system. Thus, even as framed, claims 1 and 44 do not include any of the computerized elements of a server system but only the computerized elements of the client system, which in fact amount to no more than a conventional general purpose computer.

56. In summary, then, the Respondent seeks a monopoly on the basis of a set of instructions by which known elements – operating as they have always been designed to do – are used to process pre-existing information, thus allowing a customer to place an online order by pressing a single-click button. To determine whether the claimed monopoly is warranted, the Court must consider whether that sequence of instructions is patentable subject-matter: whether it falls within the statutory definition of “invention”.

WHAT SUBJECT-MATTER IS PATENTABLE?

57. In respect of patent law at large, courts in Canada have continued to proceed on the basis expressed over four centuries ago in the *Case of Monopolies*: that trade monopolies generally are contrary to the public interest, but that certain exceptions

that are understood to benefit the public interest should be permitted.⁵⁴ To that end, in recent years, increased prominence has been given to the idea that "...at the heart of the patent system, is the "bargain" that exists between the public and inventors."⁵⁵ Implicit in the role of the Court is the duty to ensure that the proper intent of that bargain is realized.⁵⁶

58. Though inherently referred to most often in cases where the patentee's description of his invention is said to be insufficient, the bargain concept retains its force in respect of cases where the patentability of the subject matter is in issue. That is, the public should not be expected to suffer the negative effects of extending monopoly privileges in exchange for an "invention" whose subject-matter does not fall squarely within the scope of patentability that Parliament intended.

59. In section 2 of the *Patent Act*, Parliament signalled a clear intention to include certain subject matter as patentable and to exclude other subject matter as being outside the intent of the Act.⁵⁷ Parliament chose to adopt an exhaustive definition that limits deserving subject matter to an "art, process, machine, manufacture, or composition of matter." (Historically, the word "art" is more likely to convey a broader and more comprehensive connotation than the word "process". For example, an "art" may involve the use of several related "processes" and "machines"⁵⁸, while a "process" is essentially indistinguishable from a "method"⁵⁹.) There are perhaps three leading cases relating to the meaning of "art" and "process": *Tennessee Eastman*⁶⁰, *Lawson*⁶¹, and *Shell Oil*⁶².

⁵⁴ *Free World Trust*, *supra* at ¶13

⁵⁵ *Eli Lilly Canada Inc.*, *supra* at ¶69

⁵⁶ *Apotex Inc. v. Wellcome Foundation Ltd.*, *supra*, at ¶37

⁵⁷ *Harvard College*, *supra*, at ¶158

⁵⁸ see *Corning v. Burden* (1858), 56 U.S. 252; see also *Refrigerating Equipment Ltd. v. W.A. Drummond Ltd.*, [1930] Ex. C.R. 154, cited at ¶34 of *Lawson*, *supra*

⁵⁹ *Tennessee Eastman Co. v. Canada (Commissioner of Patents)*, [1974] S.C.R. 111

⁶⁰ *supra*

⁶¹ *supra*

⁶² *supra*

60. In the Supreme Court's 1974 decision in *Tennessee Eastman*, a patent was sought on a surgical method for joining incisions or wounds by applying certain compounds. The issue was whether this method, apart from the compounds, was patentable subject matter as either an "art" or a "process". The Court found that though presumably it may have been considered an art or a process as those words are commonly used, it "was essentially non-economic and unrelated to trade, industry or commerce".⁶³

61. In 1970 in *Lawson*, a patent had been sought on a new method of defining the boundaries of a plot of land. The Commissioner's refusal was upheld. Cattanach J. of the Exchequer Court held that the actual invention did not satisfy the test to be applied in deciding whether it was a patentable "art". He articulated that test as follows.

[¶30] 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.

62. The facts in *Shell Oil* are described above. The Supreme Court found that the ingenuity underpinning the claimed compositions – the new use for the old compounds – fit under the category of art, and the claims were therefore patentable. Wilson J., for the Court, identified the actual invention.

... 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.⁶⁴ [emphasis added]

⁶³ as described by Binnie J. in *Apotex v Wellcome*, *supra* at ¶49

⁶⁴ *Shell Oil*, *supra*, at pages 10 and 11 (QL)

63. In the present case, Phelan J. apparently found that this passage from *Shell Oil* represents a comprehensive definition of the word “art”, that such definition is much broader than that taught by *Lawson*, and that it is broad enough to include the patent applicant’s purported “invention” here. For several reasons, however, it is submitted that he erred in so finding.

64. First, it is important to recall that in *Shell Oil*, for the first time, the central issue was whether a new use gave patentability to an otherwise unpatentable composition: “*Shell* teaches that the discovery of a new use for an old invention which is capable of practical application is an invention.”⁶⁵ Wilson J. took pains to identify the two components of the “invention” in *Shell Oil*: (1) the recognition that previously-known compounds had previously-unknown properties, and (2) the establishment of a method for a practical application of these properties. It was this combination – which produced a physical change in a physical object, as required by *Lawson* – that constituted the “new and useful art”.

65. Further, Wilson J. in *Shell Oil* quotes Cattnach J.’s test from *Lawson* at length without indication that she disagrees with either the test or the result. Indeed, it is implied that she did agree: as noted above, the practical application in *Shell Oil* has a physical agent [the compositions] which changes the character or condition of some physical object [the plants], thus satisfying the test in *Lawson*.

66. Finally, and perhaps most importantly, the *Lawson* test is plainly a practical and modern articulation of a principle that has been accepted for centuries and that is still recognized today. Wilson J. herself, in *Shell Oil*, quotes an analogous point in relation to the word “process”: “A process implies the application of a method to a

⁶⁵ ¶13, *Calgon Carbon Corp. v. North Bay (City)*, 2005 FCA 410, per Rothstein, J.A.

material or materials.”⁶⁶ In adopting the test for “art”, Cattanach J. was simply presenting a more practical formulation of the point established in the jurisprudence. The test is not new, and is well-accepted, both explicitly and implicitly.

1894:

An art, within the meaning of the Patent Laws, must accomplish some change in the character or condition of material objects. When the practice of the alleged art will not produce any physical effect, but will merely carry out a plan or theory of action without the production of any physical results proceeding directly from the operation of the theory or plan itself, it is not an art in the sense of the Patent Law.⁶⁷

2009:

It is now accepted that if the invention is the means and not the end, the inventor is nevertheless entitled to a patent on the means [citing *Lawson*]. The means themselves must, however, accomplish some change in the character or condition of material objects [citing *Lawson*] and not be merely a “plan” for the use of such object [citing *Lawson*].⁶⁸ [emphasis added]

67. The true focus of the *Lawson* test, which Phelan J. appears to have disregarded, is on the need to distinguish a patentable art or process from an unpatentable art or process. As Cattanach J. stated in *Lawson*: “I take it as well settled that all new and useful arts and manufactures are not necessarily included in s. 2(d) of the *Act* [the definition of “invention”] [¶25].

68. It cannot be doubted that a mere plan, scheme or idea, though it may describe an “art” or a “process” as those words might commonly be used, is not patentable without some means for its practical application. Wilson J. reaffirmed this in *Shell Oil*: “A disembodied idea is not *per se* patentable. But it will be patentable if it has a method of practical application.” As Phelan J. correctly noted, “The practical application requirement ensures that something which is a mere idea or discovery is not patented – it must be concrete and tangible.”[¶53]

⁶⁶ quoting *Commissioner of Patents v. Ciba Ltd.*, [1959] S.C.R. 378at 383

⁶⁷ Treatise on the Patent Law of the Dominion of Canada, John G. Ridout, 1894, p. 23

⁶⁸ Hughes and Woodley on Patents, Second edition (continuing consolidation current to October 2009), Roger T. Hughes and Dino P. Clarizio, LexisNexis Canada Inc., Markham, page 128

69. However, he went on to say that “This requires some sort of manifestation or effect or change of character.” [¶53] It is submitted that more is required: for the purpose of determining patentable subject matter, a discernable line is required to divide those ideas which have achieved practical application from those which have not. Otherwise, it will be impossible for the Commissioner to perform the important role of determining whether an invention “merits the grant of monopoly privileges”. The *Lawson* test already represents the outer edge of that line, and it would be futile to attempt to make that determination without it. Phelan J.’s apparent test – “some sort of manifestation or effect or change of character” – is so imprecise as to be unworkable.

70. Thus, an invention that may be considered an “art” or a “process” will be patentable only if it can be said to be an “art” or a “process” within the meaning of section 2. That provision must be interpreted as requiring an “art” or a “process” to rely on a physical act (or series of acts) that causes a change in character or condition of some physical object.

THE “INVENTION” HERE IS NOT PATENTABLE SUBJECT MATTER

71. As discussed above, the actual invention here amounts to a set of instructions by which known elements are used to process pre-existing information, thus allowing a customer to place an online order by pressing a single-click button. Plainly, nothing in that can be said to cause any change of character or condition of any physical object. Phelan J. appears to have found “practical application” in either “a change in state or information in a part of a machine” [¶57] or “in the customer manipulating their computer and creating an order” [¶75]. Neither of these findings can be correct.

72. Phelan J. erred in suggesting that there is a need to modify the *Lawson* test in order to make it applicable to a machine such as a computer. Where computers or

computerized components are truly essential elements of an actual invention, the physical changes that occur during their operation satisfy the existing *Lawson* test without any need for modification. However, Phelan J. also erred when he took into account physical changes occurring in the computer or computerized system referred to in claims 1 and 44 even though, as discussed above, those components do not form part of the actual invention in this case. Any such physical changes in this case result simply from the computerized components operating as they have always been designed to do.

73. Thus, the actual invention cannot be said to be a “machine”, an “art” or “process” as understood in the statutory definition. The actual invention, properly identified using the actual invention analysis in a purposive construction of the claim, does not fall within the scope of patentable subject matter that Parliament intended necessary to an acceptable bargain between the inventor and the public.

74. Finally, the Commissioner in her Decision noted that “a common characteristic of the five categories of invention is that they are technological in nature”. As well, she cited⁶⁹ numerous references to the correspondence between patentable inventions and technology, including explicit provisions from the international *Agreement on Trade-Related Aspects of Intellectual Property* and from the *Patent Rules*. It is submitted that for a Court to recognize that non-technological subject-matter is patentable would clearly represent a radical departure from historical understandings, which should not be undertaken without explicit direction from Parliament. (It has been long understood that for subject matter to be patentable it must relate to the manual and productive arts⁷⁰ and not to a fine art. For example, an artistically inventive painting on a canvas or a musically innovative recording on a CD are not patentable subject matter within the meaning of the *Patent Act*, even though the canvas and the CD are physical and their creation involves physical processes.) In deciding as it did, the Federal Court

⁶⁹ Commissioner’s Decision, ¶150 to ¶161, Appeal Book Vol. 1, pages 150 to 153

⁷⁰ see, e.g. *Tennessee Eastman* [8 CPR (2d) 117 at 154]

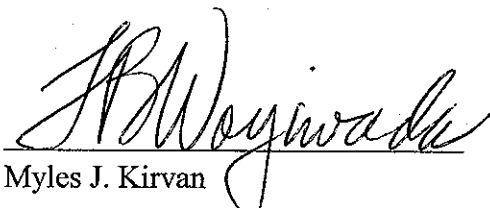
has opened the door to a broad range of previously unpatentable subject matter.

IV. ORDER SOUGHT

75. The Appellants respectfully request that this Court allow this appeal, reverse the decision in the Court below, and affirm the Commissioner's Decision, with costs to the Attorney General.

76. If this Court dismisses this appeal, the Appellants respectfully request that the patent application be returned to the Commissioner for re-examination in accordance with the Reasons given by this Court.

OTTAWA, March 3, 2011



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