## FEDERAL COURT OF APPEAL

BETWEEN:

# THE ATTORNEY GENERAL OF CANADA and THE COMMISSIONER OF PATENTS

**Appellants** 

-and-

#### AMAZON.COM, INC.

Respondent

-and-

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

Interveners

# MEMORANDUM OF FACT AND LAW OF THE INTERVENERS

#### **OVERVIEW**

- 1. The Interveners, The Canadian Life and Health Insurance Association Inc. and the Canadian Bankers Association (collectively, the "Interveners") are representative bodies with public policy mandates whose members represent key stakeholders in the financial services industry together they manage over \$3.5 trillion in assets and employ and service millions of Canadians, with operations that span the globe.
- 2. Pursuant to the Order of Madame Justice Trudel dated April 8, 2011, the Interveners were granted leave to intervene in this Appeal and to file the memorandum herein.

- 3. The Interveners start with the propositions that not "everything under the sun that is made by man" is patentable; and ideas, mental steps, mental processes, schemes and formulae are among those things under the sun that are not patentable. The *Patent Act* exhaustively defines the limits of patentability in section 2. What is not included is excluded and any extension of new subject matter should be left to Parliament.<sup>3</sup>
- 4. The Interveners submit that if the decision of The Honourable Mr. Justice Phelan<sup>4</sup> (the "Amazon.com Decision") is upheld, the result would be to circumvent the judicially accepted prohibition on the patenting of ideas, or mental steps. In the insurance, accounting and banking industries, this could result in the patenting of: the methods and steps involved in the creation, use and analysis of financial data; methods for managing financial portfolios and investments; methods for creating and managing insurance contracts; methods used to calculate risk or to analyze actuarial, mortgage or underwriting data; financial models and investment strategies; methods for conducting on-line banking; and accounting and tax schemes.
- 5. Under the test espoused in the *Amazon.com* Decision, what would otherwise constitute pure mental steps, could be converted into patentable subject matter simply by the insertion of incidental or known computer tasks as part of the patent claim. The adoption of this test would put Canada into a legal position that is consistent with the U.S. position post *State Street*<sup>5</sup>, a position that caused significant difficulties in the U.S. and which was expressly rejected by the U.S. Supreme Court (the "USSC") in *Bilski* ("*Bilski* USSC").
- 6. The Interveners wish to discuss the practical consequences of any test for subject matter patentability and to suggest a framework for such a test by way of a series of

<sup>3</sup> Harvard College, supra note 1 at paras. 153-155, 158.

<sup>&</sup>lt;sup>1</sup> Harvard College v. Canada (Commissioner of Patents), [2002] 4 S.C.R. 45, 2002 SCC 76 ("Harvard College") at para. 158.

<sup>&</sup>lt;sup>2</sup> R.S.C. 1985, c. P-4.

<sup>&</sup>lt;sup>4</sup> Reasons for Judgment and Judgment of Justice Phelan dated October 14, 2010 ("Amazon.com"), Appeal Book, Vol. 1, Tab 2. Mr. Justice Phelan is hereinafter referred to as the "Trial Court".

<sup>&</sup>lt;sup>5</sup> State Street Bank & Trust Co. v. Signature Financial Group, Inc., 47 USPQ 2d 1596 (Fed. Cir. 1998) ("State Street").

<sup>&</sup>lt;sup>6</sup> Bilski v. Kappos, 561 U.S. , 130 S.Ct. 3218 (2010) ("Bilski USSC").

questions. The Interveners submit that these questions (set out in detail at paragraph 38) provide a framework for a test very similar to the current machine or transformation test of *Bilski* or the earlier test of *Lawson*<sup>7</sup>, giving proper protection to those claimed inventions that are not abstract ideas or mental processes and which are tied to a novel computer machine or which claim a method which effects a transformation of some corporeal or tangible object.<sup>8</sup>

- 7. With the exception of the Schlumberger<sup>9</sup> case, no Canadian Court case prior to the Amazon.com Decision has considered the question of patentable subject matter with specific reference to facts that relate to the use of a computer to move or manipulate data or information. The Interveners submit that it is wrong to assume that the Courts in Shell Oil<sup>10</sup> or Tennessee Eastman<sup>11</sup> were purporting to provide a complete answer to the question raised by this Appeal. Neither case had anything remotely to do with computer implemented steps and neither provides a complete answer to the questions that have now been raised by the use of computers by humans to store, move, calculate or manipulate data. <sup>12</sup>
- 8. The United States Court of Appeals for the Federal Circuit decision in *Bilski*<sup>13</sup> ("*Bilski* CAFC") provides some useful insight into the issues faced by this Court. <sup>14</sup> Importantly, however, the U.S. law incorporates "safety-valves" (referred to as

<sup>&</sup>lt;sup>7</sup> Lawson v. Commissioner of Patents (1970), 62 C.P.R. 101 (Ex. Ct.).

<sup>&</sup>lt;sup>8</sup> The Respondent has submitted that the "machine or transformation" test is similar to the Lawson test relied on by the Commissioner. Respondent's Memorandum of Fact and Law, para. 29.

<sup>&</sup>lt;sup>9</sup> Schlumberger Canada Ltd. v. Commissioner of Patents (1981), 56 C.P.R. (2d) 204 (F.C.A.) ("Schlumberger").

<sup>&</sup>lt;sup>10</sup> Shell Oil Co. v. Canada (Commissioner of Patents), [1982] 2 S.C.R. 536.

<sup>&</sup>lt;sup>11</sup> Tennessee Eastman Co. v. Commissioner of Patents, [1974] S.C.R. 111.

<sup>&</sup>lt;sup>12</sup> Chief Judge Michel in the *In re Bilski* case in the United States Court of Appeals for the Federal Circuit recognized the difficulties of using prior cases to analyze questions of subject matter patentability: "Analogizing to the facts of *Diehr* or *Benson* is of limited usefulness because the more challenging process claims of the twenty-first century are seldom so clearly limited in scope as the highly specific, plainly corporeal industrial manufacturing process of *Diehr*; nor are they typically as broadly claimed or purely abstract and mathematical as the algorithm of *Benson*." *In re Bilski*, 88 USPQ 2d 1385 at 1390-1391 (Fed. Cir. 2008) ("*Bilski* CAFC").

<sup>&</sup>lt;sup>13</sup> Bilski CAFC, Ibid.

<sup>&</sup>lt;sup>14</sup> The Supreme Court of Canada in *Apotex Inc. v. Sanofi-Synthelabo Canada Inc*, [2008] 3 S.C.R. 392, 2008 SCC 61at para. 60 looked to the U.S. and the U.K. law as a reason to re-examine the Canadian test for obviousness.

considerations of "extra-solution or post-solution activity") which guard against the insertion of non-inventive computer limitations to circumvent the prohibition on the patenting of ideas, mental steps and formulae. These protections are absent from the *Amazon.com* Decision. Indeed, the Interveners will argue that the *Bilski* invention of a method for hedging risk in the field of commodity trading, which was rejected by the U.S. Supreme Court as constituting unpatentable subject matter, could easily be amended to pass the current Canadian test espoused in the *Amazon.com* Decision.

9. In the paragraphs which follow, the Interveners propose a series of questions and answers to those questions, with the aim of highlighting the importance of ensuring that any framework, test or analysis adopted by this Court in determining questions of subject matter patentability for inventions like that of Amazon.com, do not allow the circumvention of the long-established rule that no one is entitled to a monopoly over ideas, mental steps, mental processes, schemes and formulae.

#### CAN "ART" ENCOMPASS A MENTAL PROCESS?

10. It is submitted that all parties accept that "art" cannot extend to ideas or mental steps. No Canadian case has suggested otherwise. *Schlumberger* directly addresses this issue and in that case the Court held that "[a]s to mental operations and processes, it is clear, in my view, that they are not the kind of processes that are referred to in the definition of invention in s. 2." Whatever the definition of "art" or any other part of the definition of invention may mean, it does not extend to mental processes or ideas, no matter how brilliant, useful, new and inventive they may be. It therefore must be conceded that there are limits to the word "art". 15

# CAN FIXATION INTO A TANGIBLE FORM MAKE A MENTAL PROCESS OR IDEA PATENTABLE?

11. It is also clear that ideas and mental processes or abstract representations can be reduced to physical form by writing or drawing as in a book, or in more modern times, by storage in some other form, such as electronically on a computer. However, the mere reduction of the idea, process or mental representation to physical form does not make it

<sup>&</sup>lt;sup>15</sup> Schlumberger, supra note 9 at 206.

patentable subject matter. Reducing a mathematical formula to paper, or storing it on a computer, does not make it patentable. It follows that the definition of invention is not unlimited and that even the addition of physical structure to an idea, calculation, mental process or mental representation does not automatically convert such idea, calculation, mental process or mental representation into patentable subject matter.

# CAN MENTAL PROCESSES IMPLEMENTED BY COMPUTER BE PATENTABLE?

12. As recognized in *Schlumberger*, there is nothing new in using computers to implement ideas. Computers were invented to make calculations and store and process data. If the calculations were to be effected by humans and not by computers, the ideas and mental processes would clearly not be patentable.<sup>16</sup> The Interveners submit that processing a formula or data using a calculator or computer does not transform previously unpatentable subject matter into a patentable "art" or "process".

## WHAT MORE IS REQUIRED?

- 13. What then are the conditions that would make such mental steps or methods patentable, if at all? Relying on *Shell Oil* and *Progressive Games*<sup>17</sup>, the *Amazon.com* Decision held that there were "three important elements":
  - i) not a disembodied idea but a "practical application"; ("Element One")
  - ii) a new and inventive method of applying skill and knowledge; ("Element Two") and
  - iii) a commercially useful result ("Element Three" and collectively, the "Amazon.com Elements").

However, even the *Amazon.com* Decision does not consider these elements alone to be sufficient. First we will examine these elements and then we will examine what more must be required and how to assess it.

<sup>&</sup>lt;sup>16</sup> Schlumberger, supra note 9 at 205-206.

<sup>&</sup>lt;sup>17</sup> Progressive Games, Inc. v. Canada (Commissioner of Patents) (1999), 3 C.P.R. (4<sup>th</sup>) 517 (F.C.T.D.), aff'd (2000), 9 C.P.R. (4<sup>th</sup>) 479 (F.C.A.).

#### **Element One**

- 14. **Practical Application**: almost all ideas have some sort of "practical application". Pure ideas such as E= mc² have a practical application, but are not in and of themselves, patentable. The *Bilski* method rejected by the USSC, also had a practical application, but was nonetheless rejected.
- 15. **Disembodied Idea:** what does a "disembodied idea" mean in the context of an idea implemented or stored on a computer? The application of the Amazon.com Elements by the Trial Court would suggest that it is enough simply to have the mental steps run on a computer for them to be not "disembodied". It is submitted that this is directly contrary to the result in *Schlumberger*. There, the alleged invention collected and stored borehole measurements and combined and analyzed them on a computer to produce a useful result. Nevertheless, the method was still held in essence to be an unpatentable mental operation or process, even though conducted by a machine.

#### **Element Two**

16. New and inventive method of applying skill and knowledge: this element appears to be nothing more than a requirement for novelty and inventiveness.

#### **Element Three**

17. **Commercially useful result:** it goes without saying that this is hardly a limitation to prevent the patenting of mental processes. All inventors are attempting to produce a commercially useful result and the mental processes or steps discussed herein arguably do so.

#### **NEEDED ADDITIONAL ELEMENTS**

18. Does *Shell Oil* help to determine whether something more is required? It is submitted that it does not. *Shell Oil* was dealing with a situation in which the invention was a novel physical use of an old plant inoculant producing novel physical effects. Precisely because of this obvious physicality, the Supreme Court in *Shell Oil* did not

have to examine the issue raised in this case because the case was a clear example of a traditional novel chemical method with physical effects.

19. It is in its attempts to articulate what more would be required to reduce a series of incorporeal steps to a patentable method that the Trial Court erred. The Trial Court spoke about the need for a "manifestation, effect or change of character". The Trial Court found that sufficient "transformation or change of character resides in the customer manipulating their computer and creating an order". In doing so, the Trial Court effectively rendered such requirement meaningless by finding such effect or change in the simple movement of data from one place in the computer (a cookie) to another place in the computer (an order form) by the known method of a user clicking a computer mouse and using known computer systems technology. If this were sufficient to provide the necessary element of patentability then any incorporeal method, whether one calls it a "business method" or a series of steps prescribing human behaviour, could be transformed into patentable subject matter by adding to the claim a conventional computer machine based implementation or reciting the use of a computer by a user to carry out the mental process or the data entry or to use the stored data.

20. Given the Trial Court's understanding of a "manifestation, effect or change of character", many mental processes when implemented by computer would arguably satisfy all of the above requirements. The categories of patentable subject matter would thus be vastly expanded to include many aspects of human behaviour. Of particular concern to the Interveners are the mental processes involved in financial or business processes which involve only the manipulation of data or numbers, or legal, accounting, tax or business concepts.<sup>21</sup> Indeed the requirements set out in the *Amazon.com* Decision are in essence no different than the pre-*Bilski* test espoused in *State Street*.<sup>22</sup> This is a

<sup>18</sup> Amazon.com, supra note 4 at para. 53.

<sup>21</sup> Such as the use and analysis of financial data, methods for managing financial portfolios and investments, methods for creating and managing insurance contracts, methods used to calculate risk or to analyze actuarial, mortgage or underwriting data, financial investment strategies and methods for conducting on-line banking, as set out at paragraph 4 above.

<sup>&</sup>lt;sup>19</sup> *Ibid.* at para. 75.

<sup>20</sup> Ibid.

<sup>&</sup>lt;sup>22</sup> State Street, supra note 5 at 1600-1601.

test which *Bilski* USSC expressly rejected and which one Supreme Court judge described as preceding the "granting of patents that ranged from the somewhat ridiculous to the truly absurd."<sup>23</sup>

#### U.S. LAW, BILSKI AND THE "MACHINE OR TRANSFORMATION TEST"

- 21. The Respondent relies on the U.S. as a patent jurisdiction where the patent legislation incorporates a definition of invention and states that it "can be instructive when interpreting the Canadian definition." The Interveners agree with this submission.
- 22. However, it is worth noting that *Bilski* USSC endorsed the machine-or-transformation test as a "useful and important clue" and "an investigative tool" that should guide the court most of the time when determining whether claimed inventions are processes that are patent-eligible. <sup>25</sup>
- 23. In addition, in relation to the "safety valve" concerns to be discussed below and as articulated by *Bilski* CAFC in relation to the addition of post-solution activity to a claim, *Bilski* USSC expressly affirmed those concerns as following established U.S. Supreme Court precedent. The U.S. Supreme Court in *Bilski* USSC, just as the court in *Bilski* CAFC, was prepared to give no weight to post-solution or extra-solution (i.e., non-inventive) computer components added to a claim.
- 24. Finally, it should be noted that the *Bilski* claim was considered an "abstract idea" by *Bilski* USSC, applying the machine or transformation test. This confirms that the U.S

<sup>&</sup>lt;sup>23</sup> Bilski USSC, supra note 6 at 3259 (per Breyer J.) quoting Bilski CAFC, citing patents on, inter alia "a method of training janitors to dust and vacuum using video displays"... "a method of using color-coded bracelets to designate dating status in order to limit the embarrassment of rejection."

<sup>&</sup>lt;sup>24</sup> Respondent's Memorandum of Fact and Law, at para. 86.

<sup>&</sup>lt;sup>25</sup> In writing a concurring judgement to highlight areas where the USSC unanimously agreed, Breyer J. noted at page 3259 that "in reemphasizing that the 'machine-or-transformation' test is not necessarily the sole test of patentability, the Court intends neither to deemphasize the test's usefulness nor to suggest that many patentable processes lie beyond its reach." In addition, the Respondent fails to point out that in rejecting the machine and transformation test as the "sole test", the USSC did so on the basis that the U.S. patent statute expressly defines "process" as including a "method" and that in addition, the U.S. patent statute contemplated the existence of some business method patents by virtue of section 273(b)(1). There are no equivalent provisions in the Canadian Patent Act. Respondent's Memorandum of Fact and Law, at paras. 87-89.

Supreme Court was taking a broad definition of "abstract idea" as including a mental process, reaching the same conclusion as *Bilski* CAFC.

#### **CLAIM EXAMPLES**

25. Let us now consider the *Bilski* claim in issue before the CAFC and the USSC<sup>26</sup> and now finally rejected. Any Canadian patent attorney could in mere minutes modify this claim to make it patentable according to the decision of the Trial Court by adding the portion shown in bold lettering below:

A computer implemented system for managing the consumption risk costs of a commodity sold by a commodity provider at a fixed price comprising the steps of:

- (a) initiating a series of transactions by computer between said commodity provider and consumers of said commodity wherein said consumers purchase said commodity at a fixed rate calculated by computer based upon historical averages, said fixed rate corresponding to a risk position of said consumer, said fixed rate stored on a server;
- (b) identifying market participants for said commodity having a counter-risk position to said consumers; and
- (c) initiating a series of transactions by computer between said commodity provider and said market participants at a second fixed rate such that said series of market participant transaction balances the risk position of said series of consumer transactions.
- 26. The modified *Bilski* claim in paragraph 25 above is a method of hedging risk in the field of commodity trading. This claim might in fact meet the patentability subject matter test espoused by the Trial Court in the *Amazon.com* Decision. It claims an invention which is not a disembodied idea, but a method of practical application, with a commercially useful result. The "concrete and tangible" or "manifestation or effect or change of character" requirement would seem to be met by simply reciting a computer to implement the method or to create the system or by storing the information on a server. On a purposive construction, the system claims would clearly disclose a machine.<sup>27</sup> A correspondingly virtually identical method claim could be created in which the necessary "physical effect" or "transformation or change of character" would reside in the customer

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<sup>&</sup>lt;sup>26</sup> Reproduced at *Bilski* CAFC, *supra* note 12 at 1387.

<sup>&</sup>lt;sup>27</sup> Amazon.com, supra note 4 at para. 73.

manipulating their computer and initiating a series of transactions. In the Trial Court's reasons, it does not matter that any commodities are not physically changed. There is a "physical effect" in the simple manipulation of the computer.<sup>28</sup>

- 27. According to the Trial Court, the essential elements test of the *Free World*<sup>29</sup> decision must govern the consideration of the claim as a whole. However, if the essential elements test of the *Free World* decision does not allow the Trial Court to disregard the addition to the claim of a computer or a known computer structure such as a mouse or server when considering whether what was claimed had the necessary corporeal, concrete or tangible aspects, then any human behaviour claim could be made patentable as set out in the example above. The essential elements test used for infringement cannot be shoehorned in to do this duty.
- 28. Indeed in these cases, the computer is an essential element as claimed but not part of the invention. Precisely because many would want to perform the mental steps or carry out the mental process by computer (or practically would have to do so), the addition of known computer implementation would not be a limit on the rights of the patent holder. The effect would be to appropriate the mental process or steps when carried out by a known computer structure.
- 29. Thus let us assume that an algorithm such as 2 + 2 = 4 was new and non-obvious and complex enough computationally or, as a practical matter, required to be carried out with sufficient speed and efficiency so that in the business world it had to be carried out by computer. Could one conclude that an inventor, having claimed a computer, did not consider it an essential element that would have to be considered as part of the claim according to the *Free World* test? And yet precisely because it recited a necessary element, that very claim would pre-empt all the practical modes of carrying out the idea, and for all practical purposes would be claiming the idea itself.
- 30. It is precisely for this reason that Judge Michel in *Bilski* CAFC observed that a mathematical formula that has no substantial practical application except in connection

<sup>&</sup>lt;sup>28</sup> Amazon.com, supra note 4 at para. 75.

<sup>&</sup>lt;sup>29</sup> Free World Trust v. Électro Santé Inc., [2000] 2 S.C.R. 1024, 2000 SCC 66.

with a digital computer, would wholly pre-empt the mathematical formula itself and the practical effect would be a patent on the algorithm itself.<sup>30</sup> This echoes a very similar concern expressed differently by Mr. Justice Pratte in the Court of Appeal in *Schlumberger*.<sup>31</sup> Similarly, the *Bilski* CAFC Court concluded that tying a process to a computer may not actually be limiting where the fundamental principle at issue, an algorithm, has no utility other than its operation in a computer.<sup>32</sup>

- 31. The courts in *Bilski* CAFC and *Bilski* USSC were also alive to the concern of extra-solution or post solution activity thrown into a claim to make it seem to be patentable subject matter although the real invention was a mental process. As the *Bilski* CAFC court stated, "insignificant post-solution activity [recited in a claim] will not transform an unpatentable principle into a patentable process." Further, "[t]he notion that post-solution activity...can transform an unpatentable principle into a patentable process exalts form over substance." Therefore, even if a claim recites a specific machine or a particular transformation of a specific article, the recited machine or transformation could constitute mere "insignificant post-solution activity". Examples include a simple recordation or storage step in the middle of a claimed process or a presolution step of gathering data which is incapable of imparting patent-eligibility under section 101.<sup>35</sup>
- 32. The *Bilski CAFC* court did not consider this approach to be inconsistent with the view that a patent claim must be considered as a whole.<sup>36</sup>
- 33. An issued pre-*Bilski* U.S. patent illustrates the problems the U.S. faced under the *State Street* test in the absence of clear direction concerning how to deal with post-solution or extra-solution activity. This patent has no equivalents issued or pending in Canada.

<sup>&</sup>lt;sup>30</sup> Bilski CAFC, supra note 12 at 1390-1391.

<sup>&</sup>lt;sup>31</sup> Schlumberger, supra note 9 at 206.

<sup>&</sup>lt;sup>32</sup> Bilski CAFC, supra note 12 at 1392 citing Gottschalk v. Benson, 409 U.S. 63 (1972).

<sup>&</sup>lt;sup>33</sup> *Ibid.* at 1393 citing *Diamond v. Diehr*, 450 U.S. 175 (1981).

<sup>&</sup>lt;sup>34</sup> *Ibid.* citing *Parker v. Flook*, 437 U.S. 584 (1978).

<sup>&</sup>lt;sup>35</sup> *Ibid.* at note 14.

<sup>&</sup>lt;sup>36</sup> *Ibid.* at 1394.

34. The Interveners refer to a U.S. patent issued in 2006 from an application filed in 1999, a claim of which is reproduced without additions, but bolding has been added by the Interveners:

A data processing method for administering an annuity product having an account value and a guarantee of lifetime payments, comprising the steps of: **a**. establishing a charge for paying the lifetime payments after the account value reaches zero in accordance with the guarantee; **b. using a computer**: 1. determining an initial benefit payment; 2. determining a subsequent periodic benefit payment; and 3. periodically determining the account value; c. periodically paying the initial payment and the subsequent payment and reporting the account value to the beneficiary.

- 35. The above claim is nothing more than a series of mental steps into which a computer has been dropped to establish some level of tangibility. Applying the *Amazon.com* test, it is i) arguably not a disembodied idea but a "practical application"; ii) presumably it is a new and inventive method of applying skill and knowledge; and iii) we can assume that it has a commercially useful result. According to the *Amazon.com* Decision, the physical effect can reside in a person manipulating their computer. If this is so, the claim is, or can easily be revised, to meet this test, thus indirectly, but for all practical purposes, patenting a series of mental steps.
- 36. Similarly, an abandoned Canadian patent filed on January 24, 2003, published December 4, 2003 and abandoned on January 25, 2010, which is no longer a pending application, is submitted as a theoretical example only. A slightly modified main claim as filed is reproduced. The bolded words have been added by the Interveners;

A **computerized** method for analyzing the performance of a plurality of investments, the method comprising:

using a data source stored on a hard drive of a computer from which can be derived by computer the percentage increase or decrease in the value of each investment during each of consecutive reporting periods within a given time frame; calculating by computer values of an investment performance measurement for a plurality of overlapping holding periods within the time frame, respectively; using the resulting values to judge the desirability of each investment.

This patent claims nothing more than the abstract idea of the manipulation and storing and analyzing of data representing investment amounts. Again if the physical effect can reside in a person manipulating (in this claim "using") their computer, the *Amazon.com* test is easily met.

37. From the perspective of the Interveners, these claim examples reveal the danger of a test for subject matter patentability that permits the patenting of ideas or schemes by the mere addition of incidental or known computer limitations such as "a computerized method for..." or "storing data on a server". These examples illustrate the importance of analyzing the applicant's inventive contribution in determining questions of subject matter patentability.

#### FRAMEWORK FOR A TEST

- 38. With the foregoing in mind, the Interveners consider the questions that it is submitted the Court will need to answer in order to determine the issues on appeal to be as follows:
  - a) Must any expansion of patentability beyond the traditional meanings of the headings in section 2 of the *Patent Act* (i.e., art, process, method, machine, composition of matter) be effected by the legislature or the courts?

Harvard College states that any such expansion should be left to the legislature.

b) Do mental processes and ideas fall within the headings in section 2?

For the reasons expressed in *Schlumberger* and reviewed above at paragraphs 10-11, mental process and ideas are not patentable subject matter.

c) Should the following be considered a series of mental steps or ideas and therefore not patentable: the creation of legal or financial relations by contract or other arrangement; a calculation or algorithm (flowchart) prescribing steps or a system to manipulate or manage information or store data?

Mental steps or processes of this kind have previously been considered by a Canadian court in *Schlumberger* and by the U.S. Court in *Bilski*. Where nothing but an abstract concept, or a number representing a value, or data representing collected information (such as customer information) is stored or moved or recalculated, this is in essence a series of mental steps or a mental process that is not patentable according to the reasoning of *Schlumberger* or *Bilski*.

d) Does using a general purpose computer in a known way to complete any of the steps or ideas in (c) above make such steps or ideas patentable?

For the reasons that are addressed above it is submitted that it does not. What has been invented must be considered, and not the noninventive, even if essential, extra-solution aspects.

e) Does implementing an idea via a computer make the idea patentable only if it implements a novel process/method that causes/results in a physical change in a physical object?

For reasons that will be addressed by the Appellant, the Interveners consider that the *Lawson* test is still the right guide post for computer implemented inventions. *Lawson* is consistent with *Bilski* USSC. There must be something corporeal about the method or system that is part of the invention. Physicality introduced by means of non-inventive known computer structure or function is not sufficient.

f) Must the invention claimed reside in the physical structure?

Again for reasons expressed above, for a computer implemented method, it is not enough if the recited physical structure added to the claim is a general purpose computer or known computer structure. Where a computer is used to carry out the idea but forms no part of the invention, the necessary physical structure must be found elsewhere than in the use of the computer.

g) Is the movement of data in a computer a change in a physical structure?

The movement or arrangement of data in a computer is typically nothing more than the movement of abstract information. If this could be done as a mental process then the fact of the use of a computer does not add the necessary physical structure or make the claim any less an unpatentable mental process.

h) Based on the reasons of the Trial Court, what is a "manifestation, effect or change of character"?

The Trial Court found that simply supplying a computer implementation provided a "manifestation, effect or change of character" or that a "physical effect, transformation or change of character" could reside simply in a customer (user) manipulating their computer, and creating an order. This test would seem to have an almost unlimited meaning in the context of a computer implemented invention and provide no practical limitation to claiming abstract ideas or methods when performed on a computer.

39. The *Bilski* CAFC court, just as this Court did in *Schlumberger*, concluded that a claimed process wherein all of the process steps may be performed entirely in the human mind is obviously not tied to any particular machine and does not transform any article into a different state or thing.<sup>37</sup> The Interveners submit that the addition of a general purpose computer or known computer system is insufficient to transform an otherwise unpatentable art or process into a patentable art or process.

### **ORDER SOUGHT**

40. The Interveners respectfully request that this Court allow this Appeal, reverse the decision in the Court below, articulate the test to be applied to computer implemented inventions as submitted herein and refer the matter back to the Commissioner for consideration in accordance with the Court's reasons, without costs to the Interveners.

**TORONTO**, April 29, 2011

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<sup>37</sup> Bilski CAFC, supra note 12 at 1396, note 26.

### **AUTHORITIES**

#### **Legislation**

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

## Case Law

Apotex Inc. v. Sanofi-Synthelabo Canada Inc, [2008] 3 S.C.R. 392, 2008 SCC 61

Bilski v. Kappos, 561 U.S. , 130 S.Ct. 3218 (2010)

Free World Trust v. Électro Santé Inc., [2000] 2 S.C.R. 1024, 2000 SCC 66

Harvard College v. Canada (Commissioner of Patents), [2002] 4 S.C.R. 45, 2002 SCC 76

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