

Commissioner's Decision No. 1481
Décision du commissaire n° 1481

TOPICS: J-00 Meaning of Art
J-50 Mere Plan

SUJETS: J-00 Signification de la technique
J-50 Simple plan

Application No. 2,693,150
Demande n° 2 693 150

IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application number 2,693,150, having been rejected under subsection 30(3) of the *Patent Rules*, has subsequently been reviewed in accordance with paragraph 30(6)(c) of the *Patent Rules*. The recommendation of the Patent Appeal Board and the decision of the Commissioner are to refuse the application.

Agent for the Applicant:

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INTRODUCTION

- [1] This recommendation concerns the review of rejected patent application number 2,693,150, which is entitled “Systems and Methods for Volume Clearing in Online Trading of Credit Derivatives”. The patent application is owned by Creditex Group, Inc. The Patent Appeal Board (the “Board”) has reviewed the rejected application pursuant to paragraph 30(6)(c) of the *Patent Rules*. The outstanding defect addressed in this review is whether or not the claims define statutory subject matter. As explained below, our recommendation is to refuse the application.

BACKGROUND

The application

- [2] Canadian patent application 2,693,150 is based on a previously filed Patent Cooperation Treaty application and is considered to have a filing date of August 25, 2008. It was made available to the public on March 5, 2009.
- [3] The application pertains to computer implemented systems and methods for volume clearing during an online trading of credit derivatives. Volume clearing allows for additional trades of a credit derivative at a determined price level within a determined time limit so as to maximize a total notional amount of trades.

Prosecution history

- [4] On August 18, 2015, a Final Action (“FA”) was written pursuant to subsection 30(4) of the *Patent Rules*. The FA explained that the application is defective on the ground that the claims on file define non-statutory subject matter and do not comply with section 2 of the *Patent Act*.
- [5] In a February 10, 2016 response to the FA (“RFA”), the Applicant submitted arguments for allowance and provided a set of proposed claims. As the Examiner considered the application still did not comply with the Act and Rules, the application was forwarded to the Board for review pursuant to subsection 30(6) of the *Patent Rules*, along with a Summary of Reasons (“SOR”) maintaining the rejection of the application.
- [6] With a letter dated July 28, 2016, the Board sent the Applicant a copy of the SOR and offered the Applicant the opportunity to make further written submissions and to attend an oral hearing.

- [7] With its response to the SOR (“RSOR”) of October 11, 2016, the Applicant accepted an oral hearing and provided further submissions as to why the application should be allowed.
- [8] The present Panel was formed to review the application under paragraph 30(6)(c) of the *Patent Rules* and to make a recommendation to the Commissioner as to its disposition. In a preliminary review letter dated March 23, 2018 (“PR”), we presented our analysis and rationale as to why, based on the record before us, the subject matter of the claims on file did not comply with section 2 of the *Patent Act*. With respect to the proposed claims, we stated that our preliminary view with regard to the claims on file would not have changed if the proposed claims had been adopted.
- [9] In its response to the PR letter (“RPR”) dated April 27, 2018, the Applicant provided arguments as to why the application conforms to the Act and Rules.
- [10] A further submission dated April 30, 2018 provided an Affidavit regarding the subject matter of the application from an employee of the Applicant, Mr. Andrew J. Surdykowski.
- [11] An oral hearing was held before the Panel on May 3, 2018.

ISSUE

- [12] The only issue to be addressed by this review is whether the subject matter of claims 1-23 on file falls within the statutory meaning of “invention” according to section 2 of the *Patent Act*.

LEGAL PRINCIPLES AND PATENT OFFICE PRACTICE

Purposive construction

- [13] In accordance with *Free World Trust v Électro Santé*, 2000 SCC 66 [*Free World Trust*], essential elements are identified through a purposive construction of the claims done by considering the whole of the disclosure, including the specification and drawings (see also *Whirlpool v Camco*, 2000 SCC 67 [*Whirlpool*] at paragraphs 49(f) and (g) and 52). In accordance with the *Manual of Patent Office Practice*, revised June 2015 (CIPO) [*MOPOP*] at §13.05, the first step of purposive claim construction is to identify the skilled person and his or her relevant common general knowledge (CGK). The next step is to identify the problem addressed by

the inventors and the solution put forth in the application. Essential elements can then be identified as those required to achieve the disclosed solution as claimed.

- [14] In its RFA and RPR, the Applicant disagreed with the approach taken by the Office with regards to claim construction as described in *MOPOP*. The Applicant submitted that these guidelines and their application are valid and lawful only if they correctly apply the principles of claim construction set forth in *Free World Trust* and *Whirlpool*. The Applicant also submitted that these guidelines do not comply with the principles and guidelines set out in *Canada (AG) v Amazon.com Inc*, 2011 FCA 328 [*Amazon.com*].
- [15] According to the Applicant's submissions, *Free World Trust* and *Whirlpool* show that an element is only non-essential if the skilled reader would have understood from the claim language that the inventor intended it not to be essential and the skilled reader would have appreciated, as of the publication date, that the element could be substituted without affecting the working of the invention. The Applicant also referred to *Shire Canada Inc v Apotex Inc*, 2016 FC 382 and *Bauer Hockey Corp v Easton Sports Canada Inc*, 2010 FC 361, aff'd 2011 FCA 83.
- [16] The approach described in *MOPOP* was developed in response to *Amazon.com* and thus reflects the principles of that case, as well as of the earlier *Free World Trust* and *Whirlpool* cases. For example, *Amazon.com* at paras 43, 44, 47, 61–63, 69, 71, 73–74 explains that purposive construction “cannot be determined solely on the basis of a literal reading of the patent claims”, that claim language may be “deliberately or inadvertently deceptive”, that a claimed practical application or embodiment may nonetheless not be part of the essential elements of a claimed invention, that purposive construction must be based on “a foundation of knowledge about the relevant art” and that without such a foundation, a presumption of essentialness may not be well informed.
- [17] The guidance of *MOPOP* at § 13.05.02b echoes these principles: a properly informed purposive construction must consider the application as a whole, including the problem addressed by the application and its solution. The solution to that problem informs the identification of the essential elements: not every element that has a material effect on the operation of a given embodiment is necessarily essential to the solution. The mere presence of an element in the claim language chosen by the inventor cannot override all other considerations during purposive construction of the claims.

Statutory subject matter

- [18] The definition of invention is set out in section 2 of the *Patent Act*:
- “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.
- [19] Following the Federal Court of Appeal decision in *Amazon.com*, the Office released an examination memo (PN2013-03 “*Examination Practice Respecting Computer-Implemented Inventions*”, (CIPO, March 2013) [PN2013-03]) that clarified examination practice with respect to the Office’s approach to computer-implemented inventions.
- [20] As stated in PN2013-03, Office practice considers that where a computer is found to be an essential element of a construed claim, the claimed subject matter will generally be statutory. Where, on the other hand, it is determined that the essential elements of a construed claim are limited to matter excluded from the definition of invention (e.g. a mere idea, scheme, plan or rules, etc.), the claim will not be compliant with section 2 of the Act.
- [21] In the RPR, the Applicant contended that the Office practice in determining statutory subject matter fails to consider the intent of the decision of the court in *Amazon.com*. Referring to that decision, the Applicant argued that a business method without the involvement of a computer is not necessarily non-patentable, and thus by implication, there is no automatic exclusion of a business method in Canada.
- [22] The Panel agrees that a “business method” or an equivalent type of subject matter is not automatically excluded in Canada. Rather, a claim is construed to determine the essential elements, following which a determination is made as to whether or not those essential elements define statutory subject matter. The Court at para 63 of *Amazon.com* stated that if a novel business method is found to be “...not the whole invention but one of a number of essential elements in a novel combination”, then the claim may define patentable subject matter. But such a combination would, by the Courts reasoning, require at least one essential element in to be statutory. Further, the Panel also does not agree with the Applicant’s assertion that a business method can be patentable when assessed for “any novel or inventive aspect”. Novelty, inventiveness, utility and subject matter are each independently assessed to determine claim validity.

ANALYSIS

Claim Construction

The skilled person

[23] The PR letter identified the person skilled in the art as a team “comprising financial specialists or related trading experts, as well as information technologists experienced with developing computerized tools for such specialists and experts”. The Applicant did not disagree with this characterization and we use it in this review.

The CGK

[24] The PR letter identified the knowledge belonging to the CGK of the skilled person. As the Applicant did not disagree, we adopt the following knowledge as CGK for this review:

- knowledge involved in financial and trading markets, especially credit derivative markets; and
- knowledge of general purpose computer hardware and general computer programming technology, including the ability to implement the disclosed methods using said general purpose computers and programming.

The problem and solution

[25] Based on the CGK of the skilled person and a fair reading of the description, and having considered the arguments presented in both the FA and RFA, the PR letter set out what the skilled person would understand as the problem and solution being addressed by the application:

...the problem being solved is how to increase the number (or volume) of trades in the credit derivatives markets without artificially influencing pricing levels. The solution relates to an improved method for trading in the credit derivative market that aims to increase the volume of trades using a technique that allow for volume clearing of the most liquid credit derivatives at a set price and in within a set time limit.

[26] We note that in its RFA, the Applicant similarly stated that the invention “solves the problem of providing a suitable infrastructure to increase the number of transactions in a given financial market using volume trading, while at the same

time protecting the financial market from artificial increase or decrease in price levels”.

- [27] However, in its RPR letter and at the hearing, the Applicant disagreed with the Panel’s statement of the problem and solution. Instead, the Applicant suggested that the problem addressed by the claimed invention is “...how to improve the efficiency of electronic trading systems used for trading credit derivatives” and therefore is a computer problem.
- [28] The Panel agrees with the Applicant that at a high level, the application seeks to improve efficiencies in the electronic trading of credit derivatives. By their nature, patent applications (save the exceptional pioneer-type patents) typically disclose improvements to systems, methods, compositions, etc. It would not be unexpected that a patent application would seek to disclose some improvements to overcome problems, deficiencies, issues or inefficiencies in existing systems. The present application does discuss certain deficiencies and problems in the markets and the trading of credit derivatives, all in the context of electronic trading systems.
- [29] However, we disagree with the assertion that by seeking to improve efficiencies in the electronic trading of credit derivatives, the application must therefore address a computer problem.
- [30] First, the skilled person would understand that problems in trading credit derivatives in the context of computerized electronic trading systems could occur as the result of deficiencies in the manner, rules or market parameters of trading derivatives themselves. Alternatively, problems might arise as the result of technical limitations of the computerized trading platform, computer architecture or computer implementation. The skilled person would note that the description is primarily, if not exclusively, directed to issues in the credit derivative market and the pricing of derivatives themselves, and not to any issues in the technical limitations of the existing computer platforms.
- [31] Second, the skilled person would also note that the description is substantially silent on any specific solution involving the computer architecture or computer implementation, and only discloses generic and conventional computer systems. Instead, the application discloses substantial detail regarding certain rules for selling a credit derivative at a fixed clearing price and to maximize the notional amount of those trades. This instructs the skilled person that the problem does not reside in the computer implementation, but rather in the manner or methods of performing credit derivative trading.

- [32] Therefore, we do not agree that the skilled person would see that broadly identifying a need to “improve efficiency” in a system or method operating in a computerized or electronic environment necessitates solving a computer problem. In our view, the skilled person reading the instant application would identify a more specific problem being addressed, as we set out in our PR letter.
- [33] In the RPR, the Applicant also argued that the solution improves efficiency “by matching buy and sell orders to maximize the total notional amount” of the traded derivative and as a result “minimizes the number of tickets being processed”. The RPR alleges this provides a technical solution to a computer problem.
- [34] We agree that the solution should correctly include the term “notional” in regards to the amount of trades. Although we inadvertently omitted this feature from our PR letter, we do not agree that the skilled person would see that the matching algorithm employed is a solution to a computer problem. The skilled person would know that inherent in any trading system or method, there exist rules or algorithms to match buyers and sellers in order to complete the trades. The skilled person reading the description would understand that the specific matching algorithm addresses a need to minimize the effect that orders to trade a derivative have on the price in the small credit derivatives market: the skilled person would not understand the disclosed algorithm was addressing any deficiency in how the computers processed the trade data. The matching of trades is a solution to the trading problem and does not address a technical solution to a computer problem.
- [35] Furthermore, while a secondary result of the matching routine may be that the number of trades is minimized, the Panel sees no direct evidence in the description that this improves the computer efficiency, such as a reduced number of processing steps or a reduction in power consumption, as was suggested in the RPR and at the hearing. Instead, the focus of the description addresses the deficiencies mentioned earlier, i.e. to increase the number of notional trades without unduly influencing the price of the derivatives.
- [36] We reiterate that given the sparse and high level nature in the description regarding the implementation details, the skilled person would understand the problem and solution do not reside in the specific programming or manner of executing a matching rule to maximize volume trading, or in any real-time calculations or computer network communications necessary to affect the trading of credit derivatives. This again points to the problem and solution being directed to the

methods and procedures of trading of credit derivatives in an electronic trading environment.

[37] In support of the position taken in the RPR regarding the problem and solution, the Applicant submitted an Affidavit from one of its employees, Mr. Andrew J. Surdykowski. He is identified as an Assistant Secretary with experience in financial and trading markets generally, including specific experience with credit derivatives markets and the design and development of electronic trading systems for such markets. The Affidavit (at page 2) provides his opinion of the credit derivative electronic trading environment:

3. Trading credit derivatives with conventional electronic trading platforms/systems (e.g. used to trade stocks and bonds), however, has created some unique problems due to the unique nature of credit derivatives (and their market), and inherent deficiencies of the conventional platforms and systems. One of those problems / deficiencies is the susceptibility of the credit derivatives market to artificial price movements. This susceptibility is particularly relevant in credit derivative markets where conventional electronic trading platform technology is used. This is due, at least in part, to the fact that conventional platforms are not equipped to handle the very unique characteristics or requirements of trading credit derivatives positions or of credit derivatives markets generally, which differ significantly from that of conventional securities and conventional electronic markets. For example, credit derivative positions require different and additional definition and detailed data before they may be traded electronically, and conventional platforms are not equipped to gather and/or process such additional data in an efficient manner.

4. Further, electronic trading platforms, by their nature, disseminate pricing information (i.e., information on trades) essentially instantaneously. Unlike in conventional markets (where conventional securities are traded, for example), however, the quick dissemination of pricing information is more likely to create a 'price-cascade' situation (e.g., caused by artificial increases or decreases in prices, thereby destabilising the entirety of the electronic market). This is because of the sensitive nature of the credit derivatives market and the relatively unique characteristics of credit derivatives themselves. Indeed, the credited derivatives market is a fairly illiquid market, which means that relatively small number of trades and/or participants can artificially sway the market; and credit derivative positions are themselves more complicated than conventional instruments and must be defined in much greater detail before they may be electronically traded on any platform, as noted above. Because of these and other factors, trading credit derivatives on

electronic platforms creates unique challenges that do not exist when trading conventional securities on conventional platforms.

[38] However, in our opinion, the statements in the Affidavit support the understanding by the skilled person of the more specific problem as set out in the PR letter.

[39] The Affidavit identifies two examples of deficiencies or issues with trading credit derivatives on conventional electronic trading platforms:

- i. current electronic trading systems are not equipped to handle the “different and additional definition and detailed data” that credit derivative positions require before they can be traded electronically, given that credit derivative positions are themselves “more complicated than conventional instruments”; and
- ii. the quick dissemination of pricing information is more likely to create a ‘price-cascade’ situation caused by artificial increases or decreases in prices, thereby destabilising the entire market. The Affidavit clarifies that the credit derivative market is a “fairly illiquid market which means that relatively small number of trades and/or participants can artificially sway the market”.

[40] Regarding the first issue, the skilled person would find no clear detail in the specification that would appear to address this issue. There is no disclosure of any solution or implementation that addresses the alleged inability (or “shortcomings of existing technology”, mentioned in the RPR) of current computer systems to handle “different”, “detailed” or “more complicated” trading data. The skilled person knows that conventional computers process data according to their programmed instructions as they are known to do. The type or meaning of the data is not a problem for conventional computers to process, nor does the application describe any problem in the processing of the alleged “complicated” data involved in trading credit derivatives electronically.

[41] Regarding the second issue, the skilled person would recognize that the application appears to address the problem of artificial price sways that might destabilize the market. As we noted in the PR letter, the description teaches that in comparison to the stock market, the credit derivative market is small and therefore increasing volumes of trades would artificially influence pricing levels in such small market:

“The credit derivative market is also unique in many different ways. Traditionally, the credit derivative market has not been as well

organized or regulated as stock exchanges or bond markets. The user base (or the number of potential counterparties) of credit derivative market is much smaller than that of public stocks. There is a need to increase the number of trades of credit derivatives. At the same time, there has been concern that large trades or even a perceived desire for large trades may artificially influence pricing levels in the relatively small credit derivative market.”

- [42] The skilled person would recognize that the remainder of the application addresses this problem, detailing specific trading procedures or rules to achieve an increase in volume (“volume clearing”) while minimizing the impact on fluctuating price levels (such as determining a set clearing price level).
- [43] Therefore, we consider that the skilled person would see the problem as being specific to the inefficiencies in the electronic-based credit derivative trading market, wherein an increase in the number and speed of trades causes artificial influences in the market price. The solution to this problem is a specific algorithm to trade credit derivatives using a matching rule that ensures that a large notional amount can be traded at a set volume clearing price level, preventing artificially influencing the price of the traded credit derivatives.

The essential elements

- [44] Claim 1 on file is considered representative of the invention:

A computer-implemented method for volume clearing in an electronic trading system of credit derivatives, the method comprising:

- providing an electronic trading system comprising at least one storage device for storing instructions and a processor coupled to the at least one storage device for executing the instructions, said instructions causing the electronic trading system to perform the steps of:
- selecting, from a plurality of credit derivatives, at least one most liquid credit derivative that has either been traded or seen trading interest in the electronic trading system during a predetermined time period;
- determining a volume clearing price level for the at least one most liquid credit derivative based on:
 - an availability of a last bid, a last offer, or a last trade associated with the at least one most liquid credit derivative,
 - a timing relationship among the last bid, the last offer, and the last trade, if available, and
 - price levels of the last bid, the last offer, and the last trade, if available;

- inviting trading clients of the electronic trading system to submit, within a time limit buy orders and sell orders for the at least one most liquid credit derivative at the volume clearing price level, each buy order or sell order specifying a desired volume;
- matching the buy orders and the sell orders submitted within the time limit to maximize a total notional amount of the at least one most liquid credit derivative that can be traded at the volume clearing price level; and
- completing trades at the volume clearing price level according to the matching of the buy orders and the sell orders.

- [45] The meaning of the terms in the claims was not at issue and would be easily understood by the person skilled in the art.
- [46] The Applicant, in the RPR and at the hearing, submitted that the physical computing components (e.g., at least including the electronic trading system, the storage device for storing instructions and the processor) are essential elements of each claim as intended by the Applicant, and rather than merely convenient, they define “special purpose computer devices” that provide features in near real time and hence could not be substituted or omitted without affecting the working of the claimed invention.
- [47] We have already addressed the Office practice and legal background regarding the intent of the inventor in purposive construction. As set out in *MOPOP* at §13.05.02c, not every element having a material effect on the operation of a given embodiment is essential to the solution: some recited elements define the context or environment of the embodiment but do not actually change the nature of the solution. Accordingly, purposive construction must consider which elements are required for the solution to achieve its result.
- [48] Regarding the claimed computer features in the instant application, despite the claims’ inclusion of computer components, the Panel’s view is that based on the CGK and on the problem and solution identified, the skilled person would understand these computer components to be outside the scope of the problem and solution. Such physical elements may be part of the context or working environment of the claimed invention but are not essential elements of the claimed invention itself.
- [49] The Applicant further contended that the selecting, determining and matching steps in the independent claims can only be performed by a computer due to the computationally intensive nature of those steps and the need to automatically

maximize the total transactions. However, as explained above, the application does not address a problem of performing mathematics quicker nor of automating a matching-maximizing algorithm. Nor does the application disclose any specific solutions to address these specific computer problems. Instead, the application focuses on solutions (e.g., determining a clearing price, receiving bids, matching buyers and sellers, etc.) related to the trading of credit derivatives which are a type of financial instrument. The fact that a computer is capable of computation-intensive and time-critical calculations in the context of electronic trading systems is part of the CGK: it is precisely for these advantages of accurate and timely calculations that computers are used. However, this does not necessarily make the computer essential to the identified solution.

[50] As identified above, the solution does not lie in the technology of computer matching, data processing or data communication techniques but instead lies in the scheme and rules for determining a volume clearing price and matching the buy and sell orders to maximize the total notional amount of trades and by extension, reducing the trade tickets issued. The computer implementation of the scheme is not the focus of this application. Therefore the skilled person would understand the computer components not to be essential.

[51] Accordingly, based on the totality of arguments and evidence presented to us, claims 1 and 13 share the same set of essential elements for the identified solution, namely:

- Selecting from a plurality of credit derivatives at least one most liquid credit derivative that has either traded or seen trading interest in the system during a predetermined time period;
- Determining a volume clearing price level for the at least one most liquid credit derivative based on:
 - an availability of a last bid, a last offer, and a last trade associated with the at least one most liquid credit derivative;
 - a timing relationship among the last bid, the last offer, and the last trade; and
 - price levels of the last bid, the last offer, and the last trade;
- Inviting clients to submit within a time limit, buy orders and sell orders for the at least one most liquid credit derivative at the volume clearing price level;
- Matching the buy orders and the sell orders submitted within the time limit to maximize a total notional amount of the liquid credit derivative that can be traded at the volume clearing price level; and

- Completing trades according to the matching of the buy and sell orders.

[52] Dependent claims 2-12 and 14-23 define various embodiments of the independent claims related to the rules for determining the most liquid credit derivative, determining the volume clearing price, the determination of time limits and the use of anonymous orders. No additional physical essential features are defined in the dependent claims. We consider the wording differences between the dependent claims and the independent claims from which they stem to simply reflect different embodiments of the same set of essential elements.

Statutory subject matter

[53] The PR letter set out the Panel's preliminary view that the essential elements of claims 1-23 are directed to the rules for a volume clearing trade scheme in an online trading system and therefore outside the definition of invention in the *Patent Act*. This affirmed the position taken by the Examiner in the FA.

[54] In the RPR and at the hearing, the Applicant maintained its earlier arguments (from the RFA and RSOR) with respect to statutory subject matter and focused its position primarily on the basis of the requirement from *Amazon.com* para 66, namely:

...because a patent cannot be granted for an abstract idea, it is implicit in the definition of 'invention' that patentable subject matter must be something with physical existence, **or something that manifests a discernible effect or change.** [emphasis by Applicant]

[55] In the RPR, the Applicant contended that by maximizing the total notional amount of trades (using the matching algorithm), fewer transactions will be needed to be processed by the electronic trading system and therefore less power will be consumed and processing resources will be available for other tasks. This, it was argued, constitutes a discernible effect of change.

[56] The Panel is not persuaded that such results comprise something that manifests a discernible effect or change in this case. First, as we addressed under Purposive Construction, the essential elements are those steps involved in selecting a credit derivative, determining a volume clearing price for the derivative, obtaining buy and sell orders from interested parties, matching the orders to maximize the number of notional trades and completing the trades. The essential elements do not include any physical outputs, including any transaction records or power supply components, nor power measurements of such components. Any resulting

outcomes such as fewer calculations processed, reduced computer resources used or reduced power would be post-solution outcomes beyond the scope of the identified solution.

- [57] We further note that the skilled person would not read the specification as disclosing any detail on the manner or apparatus to achieve these outcomes. Nothing in the description clearly supports the contention that the solution results in fewer transactions with a resulting reduction in processing requirements and power consumed. These appear to be assumptions by the Applicant. The first mention in the disclosure of reduced resources is found at paragraph [0062] of the description, which states that by matching orders "...the number of trade tickets generated is minimized". However, notwithstanding that trade tickets are not part of the essential elements of the solution, there is also no physical or functional relationship disclosed in the application between such "trade tickets" and the claimed benefits of a discernible change such as reduced computing processing/ resources and/or power consumed.
- [58] Furthermore, regarding said minimizing of the number of trade tickets which the Applicant argues supports a finding of a discernible effect of the matching algorithm, the Panel refers to paragraph [0111] of the description: "Additionally or alternatively, the orders may also be matched to maximize a total executable notional amount and/or to minimize a total number of trading tickets to be issued" (emphasis added). Thus, the maximizing of total notional trades, as found essential to the solution, can be performed, in the alternative, without any reduction in trade tickets. Therefore, the Applicant's contention that the fewer trade tickets is a discernible outcome is further refuted.
- [59] At the hearing, in addition to the above mentioned arguments, the Applicant also suggested that a discernible effect or change is achieved because the trading method/system allows for buy and sell orders to be fulfilled and for price fluctuations to be reduced. Therefore, the manner in which a person trades credit derivatives is changed, for example, by paying a lower price.
- [60] Again, the Panel notes that the essential elements do not include any physical outputs or post-solution steps involving a customer interface or other outputs. Furthermore, fulfillment of trades, reducing price fluctuations and trading at lower prices are all considered to define abstract ideas that concern the manipulation and provision of information with certain meaning or intellectual significance. Such

outputs and information do not manifest a discernible effect or change in the relevant sense.

[61] As construed above, the essential elements of the solution of the present application are the schemes or rules for determining a volume clearing price and matching buy and sell orders to maximize the total notional amount of trades for a chosen credit derivative. The Panel has determined that no physical features are part of the essential elements (e.g., no computerized electronic trade system components or other physical features). Additionally, the essential elements do not comprise matter that manifests a discernible effect or change. The essential elements instead relate to an abstract scheme or set of rules to trade financial instruments, carrying 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. Such matter is outside the categories of invention in section 2.

[62] Therefore, we consider that claims 1-23 on file do not define statutory subject matter and thus do not comply with section 2 of the *Patent Act*.

Proposed claims

[63] As stated above, the Applicant submitted proposed claims 1-23 with its RFA. The proposed claims differ primarily in that the independent claims 1 and 13 are amended to include the steps of:

- receiving, from one or more data sources, a plurality of credit derivatives;
- inviting, via a user interface, trading clients; and
- receiving, via the user interface, responsive to the invitation, buy orders and sell orders submitted within the time limit from among the trading clients for the at least one most liquid credit derivative at the volume clearing price level, each buy order or sell order specifying a desired volume.

[64] In our PR letter, we construed the proposed claims similarly as the claims on file had been construed and thus viewed them as also failing to comply with section 2 of the *Patent Act*. We stated that in the Panel's view, given that the presence of these additional features would not alter the above identifications of the person skilled in the art, CGK, and problem and solution, our view is that the proposed claims would have the same essential elements as identified above.

[65] The Applicant did not offer any further comments in its RPR or at the hearing addressing the matter of the proposed claims. Accordingly, as we stated in our PR

letter, the non-statutory subject matter of the claims on file also applies to the proposed claims.

- [66] Given the proposed claims would not remedy the defect of the claims on file, it follows that the proposed claims are not considered a necessary specific amendment under subsection 30(6.3) of the *Patent Rules*.

RECOMMENDATION OF THE BOARD

- [67] In view of the above, the Panel recommends that the application be refused on the basis that the claims on file define subject matter that is non-statutory and thus does not comply with section 2 of the *Patent Act*.
- [68] We do not consider the claims proposed on February 10, 2016 to constitute specific amendments necessary to comply with the *Patent Act* and *Patent Rules*. Accordingly, we decline to recommend that the Applicant be notified under subsection 30(6.3) of the *Patent Rules* that said proposed claims are necessary.

Andrew Strong
Member

Marcel Brisebois
Member

Mara Gravelle
Member

DECISION OF THE COMMISSIONER

[69] I concur with the findings of the Board and its recommendation to refuse the application as the claims on file do not comply with section 2 of the *Patent Act*.

[70] Accordingly, I refuse to grant a patent for this application. Under section 41 of the *Patent Act*, the Applicant has six months to appeal my decision to the Federal Court of Canada.

Johanne Bélisle
Commissioner of Patents
Dated at Gatineau, Quebec,
this 29th day of April, 2019