TOPIC: J00   Subject Matter of Applications—Meaning of Art

           J10   Subject Matter of Applications—Computer Programs

           J50   Subject Matter of Applications—Mere Plan

SUJET :   J00   Objet des demandes—Signification de la technique

           J10   Objet des demandes—Programmes d'ordinateur

           J50   Objet des demandes—Simple plan

Application No. 2842736

Demande n⁰ 2 842 736

IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application number 2842736, having been rejected under subsection 30(3) of the *Patent Rules* (SOR/96–423), as they read immediately before October 30, 2019, consequently has been reviewed in accordance with paragraph 199(3)(c) of the *Patent Rules* (SOR/2019–251). The recommendation of the Patent Appeal Board and the decision of the Commissioner are to refuse the application.

Agent for the Applicant:

Borden Ladner Gervais LLP

Bay Adelaide Centre, East Tower
22 Adelaide Street West
Toronto, Ontario
M5H 4E3

INTRODUCTION

[1]   This recommendation concerns the review of rejected patent application number 2842736, which is entitled "System and Method for Conducting an Exchange Auction to Replace Legacy Derivative Positions." The patent application is owned by Creditex Group, Inc (the Applicant). The Patent Appeal Board (the Board) has reviewed the rejected application pursuant to paragraph 199(3)(c) of the *Patent Rules* (SOR/2019–251). The outstanding issue to be addressed in this review is whether the claims define patentable subject matter. As explained below, my recommendation is to refuse the application.

BACKGROUND

The application

[2]   The instant application was filed in Canada on February 11, 2014 and was laid open to the public on August 15, 2014.

[3]   The instant application relates to financial exchange auctions. More specifically, it relates to a method and system for conducting an exchange auction involving converting financial position data to compliant trade proposals.

Prosecution history

[4]   On August 31, 2018, a Final Action (FA) was written pursuant to subsection 30(4) of the former *Patent Rules*, as they read immediately before October 30, 2019 (SOR/96–423) (the former *Patent Rules*). The FA explained that the application was defective on the ground that claims 1-28 (claims on file) were directed to non-statutory subject matter and therefore do not comply with section 2 of the *Patent Act.*

[5] In the responses to the FA of October 25, 2018 and December 21, 2018, the Applicant submitted arguments for the allowance of the claims on file. The Applicant also submitted a set of proposed claims.

[6] As the Examiner considered the application still did not comply with the *Patent Act* and *Patent Rules*, the application was forwarded to the Board for review pursuant to subsection 30(6) of the former *Patent Rules*, along with an explanation outlined in a Summary of Reasons (SOR) for maintaining the rejection of the application.

[7] In a letter dated May 31, 2019, the Board forwarded a copy of the SOR to the Applicant. On August 30, 2019, in its response to the SOR, the Applicant indicated a continued interest in having the Board review the application.

[8] The undersigned was assigned to review the application under paragraph 199(3)(c) of the *Patent Rules* and to make a recommendation to the Commissioner as to its disposition. In a Preliminary Review letter (PR letter) dated February 11, 2022, I set out my preliminary analysis and rationale as to why, based on the written record, the subject matter of the claims on file is unpatentable, both falling outside section 2 of the *Patent Act* and prohibited by subsection 27(8) of the *Patent Act*. The PR letter offered the Applicant the opportunities to attend an oral hearing and to make further submissions.

[9] In response to the PR letter, the Applicant submitted a new set of proposed claims (second proposed claims) on April 14, 2022. In the response to the PR letter, the Applicant stated the reasons that these claims would overcome the defects presented in the PR letter. The Applicant also raised an issue of procedural fairness, requesting a new FA to issue before the review proceeded.

[10] The first oral hearing was held on April 28, 2022 and the Applicant discussed the claims on file and the second proposed claims. The Applicant also repeated their argument concerning procedural fairness. Following the hearing, the Applicant submitted a third set of proposed claims on April 29, 2022.

[11]   In light of the commentary of the recently released *Canada (Attorney General) v Benjamin Moore & Co*, 2023 FCA 168 [*Benjamin Moore FCA*], I reviewed the reasoning presented in the PR letter. A Supplementary PR letter (Supp PR letter) was sent to the Applicant on May 7, 2024, presenting the reasoning as to why the subject matter of the claims on file is unpatentable, both falling outside section 2 of the *Patent Act* and prohibited by subsection 27(8) of the *Patent Act*, taking into account *Benjamin Moore FCA*. The Supp PR letter offered the Applicant the opportunities to attend an oral hearing and to make further submissions.

[12]   In response to the Supp PR letter, the Applicant submitted a new set of proposed claims (fourth proposed claims) on July 5, 2024. In the response, the Applicant stated the reasons that these claims would overcome the defects presented in the Supp PR letter.

[13]   The second oral hearing was held on July 19, 2024 and the Applicant discussed the fourth proposed claims. Following the hearing, the Applicant submitted a fifth set of proposed claims (fifth proposed claims) on August 8, 2024.

ISSUES

[14]   The issue is whether the subject matter of the claims on file is prohibited under subsection 27(8) of the *Patent Act* and falls outside the definition of "invention" in section 2 of the *Patent Act*.

[15]   I also consider the fifth proposed claims.

[16]   I also consider the issue of procedural fairness raised by the Applicant in the response to the PR letter and at the first oral hearing.

ARE THE CLAIMED ELEMENTS ESSENTIAL?

[17]   In my view, the elements of the claims on file are essential.

Principles

[18]   Purposive construction is antecedent to any consideration of validity (*Free World Trust v Électro Santé Inc*, 2000 SCC 66 at para 19 [*Free World Trust*]).

[19]   In accordance with *Free World Trust* and *Whirlpool Corp v Camco Inc*, 2000 SCC 67, purposive construction is performed from the point of view of the person skilled in the art in light of the relevant common general knowledge (CGK), considering the whole of the disclosure including the specification and drawings. In addition to interpreting the meaning of the terms of a claim, purposive construction distinguishes the essential elements of the claim from the non-essential elements. Whether an element is essential depends on the intent expressed in or inferred from the claim, and on whether it would have been obvious to the skilled person that a variant has a material effect upon the way the invention works.

[20]   "Patentable Subject-Matter under the *Patent Act*" (CIPO, November 2020) [*PN2020–04*] notes that all elements in a claim are presumed essential unless such presumption is contrary to the claim language, or it is established otherwise (see also *Free World Trust* at para 57).

[21]   Since both interpretation of term meaning and identification of the essential elements are done in light of the relevant CGK, we must first identify the skilled person to determine their CGK.

Analysis of the current application

The skilled person and the relevant CGK

[22]   As noted in the PR letter, the FA (at page 2) characterized the skilled person:

> In view of statements in the description (paragraphs 0001-0003 and 0013-0020), the person skilled in the art to whom the application is directed can

be characterized as traders and brokers of financial instruments in cooperation with Information Technology personnel skilled in computerized systems for trading of financial instruments.

[23]   As also noted in the PR letter, the FA (at pages 2-3) identified the CGK as including:

• knowledge of Credit Default Swap (CDS) contracts, including the new standardized versions of Credit (paragraph 0002); and

• knowledge of computer components, devices, networks, and computer applications, including their design, implementation, operation and maintenance, including, but not limited to:

   • electronic exchange auction systems;

   • exchange of financial information data;

   • general purpose computers, special purpose computers, computing devices, processors, input and output devices, network interfaces, and user interfaces;

   • computer software and associated programming languages and memory devices and storage mediums;

   • distributed computing systems, including network protocols and information/data transfers between devices and modules; and

   • computer databases and database management protocols.

[24]   These characterizations were not disputed by the Applicant in their responses. I adopt them for this review.

Essential elements of the claims

[25]   As stated in the Supp PR letter:

> The instant application includes 28 claims on file. Claim 1 is directed to a method of conducting an exchange auction involving converting financial position data to compliant trade proposals. Claim 15 is directed to a system for conducting the exchange auction of claim 1. Dependent claims 2-14 and 16-28 recite refinements of the independent claim method and define additional features of the financial data conversion. I consider independent claim 1 as illustrative of the invention:
>
> > 1. A method of conducting an exchange auction involving converting financial position data that is not processable by downstream computing systems into financial position data that is processable by downstream computing systems, the method comprising:
> >
> > receiving, by at least one computer, non-compliant data comprising financial position data defining one or more long positions and one or more short positions associated with a first financial asset;
> >
> > matching, by the at least one computer, at least one of the one or more long positions with at least one of the one or more short positions associated with said first financial asset;
> >
> > converting, by the at least one computer, the non-compliant data into the compliant data that is processable by a downstream computing system, said converting comprising:
> >
> > > generating, by the at least one computer, a first proposed trade from the non-compliant data that includes the matched positions;

generating, by the at least one computer, a second proposed trade from compliant financial position data that is processable by the downstream computing system, said compliant financial position data defining one or more long positions and one or more short positions associated with a second financial asset, said second financial asset being associated with a same underlying financial asset as the first financial asset, wherein a net notional associated with the first proposed trade is equal to a net notional associated with the second proposed trade;

presenting the first proposed trade and the second proposed trade to a first trader and a second trader for approval;

executing the first proposed trade and the second proposed trade if when no opt-out indication is received from either the first trader or the second trader, said execution resulting in a replacement of the non-compliant financial position data with the compliant financial position data; and

processing, by the downstream processing computer system, the compliant financial position data,

otherwise, if an opt-out indication is received, receiving the opt-out indication from at least one of the first trader and the second trader, wherein receipt of said opt-out indication prevents execution of both the first proposed trade and the second proposed trade,

wherein if the opt-out indication is received from only one of the first and second traders, repeating the matching and generating steps for at least one of the matched positions belonging to the trader from which the opt-out indication was not received until no opt-out indication is received.

[26] In the PR letter, I considered all the computer-implemented method steps identified in the illustrative claim 1 to be essential, including the computer components that are used for carrying out these method steps as recited in the system claims:

> Considering the representative claim 1, and the whole of the specification, the person skilled in the art would understand that there is no use of language indicating that any of the steps in each claim are optional, a preferred embodiment or one of a list of alternatives. Nor is there any indication on the record that would lead to a determination of any claimed elements being non-essential. Therefore, in my preliminary view, all the exchange auction components and the steps carried out by the auction identified in the representative claim 1 are considered to be essential. Therefore, in my preliminary view, all the computer-implemented method steps identified in the representative claim 1 are considered to be essential, including the computer-implemented components that are used for carrying out these method steps as recited in the corresponding system claims.

> Dependent claims 2-14 and 16-28 recite further data options and data calculations. These features are also considered essential.

[27] Claim 15 is the corresponding system claim and is considered to have elements corresponding to those of claim 1. I continue to presume all the elements of the claims on file as essential.

IS THE CLAIMED INVENTION PATENTABLE SUBJECT MATTER?

[28] In my view, the subject matter of claims 1-28 is prohibited and is not patentable subject matter.

Principles

[29]   Any patentable invention must fall within the definition set out in section 2 of the
Patent Act, including falling within one of the categories defined therein:

> "**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.

[30]   Subsection 27(8) of the *Patent Act* also prescribes that:

> No patent shall be granted for any mere scientific principle or abstract
> theorem.

[31]   *PN2020–04* describes the Patent Office's approach to determining if a claim is
patentable subject matter:

> To be both patentable subject-matter and not be prohibited under
> subsection 27(8) of the *Patent Act*, the subject-matter defined by a claim
> must be limited to or narrower than an actual invention that either has
> physical existence or manifests a discernible physical effect or change and
> that relates to the manual or productive arts, meaning those arts involving or
> concerned with applied and industrial sciences as distinguished in particular
> from the fine arts or works of art that are inventive only in an artistic or
> aesthetic sense.

[32]   The determination of the actual invention is a relevant and necessary question in
assessing patentable subject-matter (*Canada (Attorney General) v Amazon.com
Inc*, 2011 FCA 328 at para 42 [*Amazon*]). As stated by the Federal Court of
Appeal in *Benjamin Moore* FCA (para 68), this determination is in line with that
Court's statement in *Schlumberger Canada Ltd v Commissioner of Patents*,
[1982] 1 FC 845 (CA) [*Schlumberger*] that a patentable subject-matter
assessment involves determining what, according to the application, has been
discovered. The actual invention is identified in the context of the new discovery

or knowledge and must ultimately satisfy the "physicality requirement" that is implicit in the definition of "invention" (*Amazon* at paras 65-66).

[33]   *Amazon* (para 44) tells us that "a patent claim may be expressed in language that is deliberately or inadvertently deceptive" and that what appears on its face to be an "art" or "process" may in fact be a claim to an unpatentable mathematical formula, as was the case in *Schlumberger*.

[34]   This observation reflects the position of the Federal Court of Appeal in *Amazon* on the physicality requirement. There is a requirement for something with physical existence, or something that manifests a discernible effect or change. Nonetheless, this requirement cannot be met merely by the fact that the claimed invention has a practical application (*Amazon* at paras 66, 69).

[35]   The patentable subject-matter concerns regarding the well-known use of a computer to process an algorithm, illustrated by *Schlumberger*, are expressed in the factors set out in *PN2020–04* that may be considered when reviewing computer-implemented inventions, namely:

- the mere fact that a computer is among the essential elements of the claimed invention does not necessarily mean that the claimed invention is patentable subject-matter;

- an algorithm itself is abstract, unpatentable subject-matter and prohibited by subsection 27(8) of the Patent Act;

- a computer programmed to merely process an abstract algorithm in a well-known manner without more will not make it patentable subject-matter; and

- if processing an algorithm improves the functionality of the computer, then the computer and the algorithm would together form a single actual invention that would be patentable.

[36] The above factors and the general concerns around the well-known use of a computer to process new abstract algorithms can be seen to involve considerations of novelty or ingenuity. Canadian law does not prohibit considerations of the novelty or ingenuity of elements of a claim in considering patentable subject-matter and finds support in situations like that of *Schlumberger* where a known tool, a computer, is used to give an abstract mathematical formula a practical application (*Benjamin Moore FCA* at paras 69-70, referring to *Amazon*). These considerations assist in the determination of the discovery or new knowledge, the method of its application and the actual invention (*Benjamin Moore FCA* at para 89) that is ultimately measured against the physicality requirement.

[37] As noted in *Benjamin Moore FCA* at para 94 (and similarly expressed in *Amazon* at para 61), the physicality requirement will not likely be satisfied without something more than only a well-known instrument, such as a computer, being used to implement an abstract method. The factors set out above from *PN2020–04* assist in determining whether something more is present.

Analysis of the current application

[38] The Supp PR letter stated that the subject matter was not patentable:

> The independent claims on file are directed to an exchange auction that is able to process trades using non-compliant financial position data through a conversion process. The rules of the exchange auction comprises receiving non-compliant data comprising one or more long and short positions; matching a long position with at least one short position; converting the financial position data by generating proposed trades involving compliant financial positions and presenting the trades for approval; executing the

trade if no opt-out is received from the traders; and if the trade is opted-out repeating the matching process with traders who did not send the opt-out.

The claims on file recite a number of computer-related elements such as a computing system, computer, computing device, server, processor, memory, and machine-readable medium. They also recite that these elements perform computer-related steps including receiving, processing, calculating, and presenting data.

As explained in *Amazon* (paras 61-63, 66, 69), a computer cannot be used to give an unpatentable abstract idea a practical application satisfying the physicality requirement implicit in the definition of invention in section 2 of the *Patent Act* simply by implementing the idea on a computer. This was the situation in *Schlumberger* where the computer was merely acting in a well-known manner.

According to *PN2020-04*, "[i]f a computer is merely used in a well-known manner, the use of the computer will not be sufficient to render the disembodied idea, scientific principle or abstract theorem patentable subject-matter and outside the prohibition under subsection 27(8) of the *Patent Act*".

In my preliminary view, there is no suggestion in the specification that the claimed computer-related elements represent anything other than generic computer components. The computer is merely being used to make the kind of calculations and data manipulation that it was invented to make. The computers used in the exchange auction referenced in the application are considered well known computers, that are performing their intended calculations and data manipulation. Paragraphs [0013]-[0015], and [0018] describe well-known computers and other hardware and their related capabilities which are regularly used in financial exchanges.

Furthermore, there is no indication in the specification that the functioning of the computer is improved by the claimed steps. There is no suggestion in the specification that there were any challenges or deficiencies in the operation of the computing device to conduct exchange auctions with non-compliant data. There is no detailed discussion of the implementation of the claimed data manipulation features that would suggest any difficulties would be overcome in that respect.

In my preliminary view, the claimed computer elements are merely used in a well-known manner and are therefore not part of the single actual invention of the independent claims on file. That is, the actual invention appears to be an algorithm or set of rules for converting non-compliant financial position data to process trades. Together, these steps represent the computer implementation of an abstract idea, theorem, or set of rules for an exchange auction.

Accordingly, the abstract scheme for conducting an exchange auction involving converting financial position data to compliant trade proposals has no physical existence itself and does not manifest a physical effect or change. Nor does the use of the computer in this case cause it to meet the physicality requirement.

By itself, the set of rules or algorithm for converting data has no physical existence and does not fit within any categories of invention in section 2. Akin to a "mere scientific principle or abstract theorem," it is also prohibited from patentability by subsection 27(8) of the *Patent Act*. Furthermore, programming a computer (using CGK) to convert data, according to the proposed rules or algorithm, does not bring this "new knowledge" into the categories of invention. As shown above, in the discussion of *PN2020–04*, processing such an algorithm on a computer system in the claimed manner does not furnish a practical application satisfying the physicality requirement.

Therefore, it is my preliminary view that the actual invention, new knowledge or discovery of the independent claims does not satisfy the "something more" as set out in *Benjamin Moore FCA* to meet the physicality requirement in *Amazon* and *PN2020-04*.

The same analysis and conclusion is applicable to independent claim 15.

In my preliminary view, the computer is also merely being used to make the kind of calculations and data manipulation that it was invented to make for dependent claims 2-14 and 16-28 which recite further data options and data calculations.

Applicant's position

[39]   As described in the Supp PR letter, the Applicant compared the claims on file to the Computer-implemented Example 1, claim 1 from the "Examples of Patentable Subject-Matter Analysis" [Examples document] from *PN2020–04* in their response to the PR letter. This was also presented at the first oral hearing:

In the example claim, the step of "performing seismic measurements" includes a third party or component which performs a set of measurements, the data of which is then received by the computer. In particular, this data is not a generic data set that is produced by the system but relies on an outside collection of data points that are not generated by the system. In pending claim 1, the method comprises conducting (equivalent to performing), an electronic auction involving a plurality of remote trader user devices. Pending claim 1 accordingly has the same third party or component which is used to produce the data which is received by the computer. The data is not a generic data set already populated in the electronic auction server, but rather is received from the remote trader user devices and is dependent on financial position data of each user. The long and short financial position data of each user corresponds, for example, to the purchase and sale of stock of each user. Changes in each user's

financial position data indeed rely on a physical effect or change (purchase and sale) in the same way that a seismic measurement relies on a physical effect or change (as determined in the CIPO guidance examples). In essence, the data received from the plurality of remote trader user devices is not much more than a measurement of each user's financial position data.

…

As shown in the claims comparison above, the Applicant submits that indeed the claimed subject matter meets the physicality requirement. The determination in the Preliminary Review fails to recognize all of the essential elements of the claim which form part of the actual invention, namely, the Preliminary Review does not consider the remote trader user devices which cooperate with the electronic auction server to form the actual invention which has a physical existence and manifests a discernable physical effect or change.

[40]   The Applicant also submitted a comparison to Example 1, claim 2 of the Examples document in the response to the PR letter (pages 5-7):

In the example Claim 2 in the new CIPO guidance, the analysis considers the sensors which are used to perform seismic measurements, and states that these do not correspond to a generic input of data to a computer as the sensors cooperate in combination with the computer because the measurements from the sensors are used by the computer in the analysis. The analysis states: "As the sensors have a physical existence and cooperate with the computer to achieve better results by the use of algorithm X, this element is sufficient to render the subject-matter of the claim patentable subject-matter". Although this example claim 2 is directed at a system claim, a similar analysis may be conducted in respect of pending claim 1 of the subject application. As the remote trader user devices have a physical existence and cooperate with the electronic auction

server to achieve better results (converting financial position data that is not processable by downstream computing systems into financial position data that is processable by downstream computing systems) by use of algorithm X, this element is sufficient to render the subject matter of claim 1 patentable subject matter.

…

As discussed above, claim 1 [of the claims on file] includes elements of measurement that generate data, for example, each trader user device measures or otherwise quantifies a user's financial position data and generates data for further processing by the electronic auction server. In respect of data output, the Applicant further adds that pending claim 1 indeed describes data output elements which carry out transmitted commands or elements performing actions on the basis of displayed results.

…

Accordingly, claim 1 includes output elements performing actions on the basis of displayed results, particularly, an action is taken based on the displayed results and a user's interaction (or non-interaction) with the system. By not interacting with the system, i.e. if no action indicator is received, this is still an action taken by the user, although a negative one. That is, the user decides whether to interact with the system or not based on the displayed results, a data output action (executing or cancelling the proposed trade) is produced on the basis of the user's decision to interact or not. In addition, the data output is carried out by a transmitted command based on the user's decision to interact or not with the system.

[41]   As presented in the Supp PR letter, for both of these examples, in the Examples document under the assessment of patentable subject-matter section, the measurements taken in step a) provide the discernible physical effects to produce data and do not correspond to generic inputs to of data in a computer.

> For claim 1 …
>
> As step a includes measurements that rely upon discernible physical effects to produce their data, step a provides the discernible physical effect or change that renders the subject-matter of the claim patentable subject-matter.
>
> …
>
> For claim 2: In this claim, the sensors which are used to perform seismic measurements do not correspond to a generic input of data to a computer… As the sensors have a physical existence and cooperate with the computer…

[42] As presented in the Supp PR letter, I do not consider the receipt of the data from the remote trader devices by the larger network to be the same as taking measurements, differing from Example document Example 1 claims 1 and 2. I consider the remote trader devices to be well-known computers operating as expected, receiving and sending data. They do not perform a measurement or provide a measurement through sensor data as an input. The claims on file are more similar to Example 1, claim 3 in the Example document, which provides a generic reception, processing, and displaying of data and does not meet the discernible physical step requirement.

> For claim 3: … data input and output steps a and c represent generic input/output steps of a computer-implemented process. In such a case, all of the essential elements correspond only to the processing of data using algorithm X to obtain better results by means of a generic computer. It is therefore necessary to ascertain whether the computer forms part of the actual invention. There is no evidence that the problem that is solved by using algorithm X is a computer problem; there is no indication that the use of algorithm X reduces the resources used in the computer processing for example. Therefore, the computer and input/output/processing steps do not

form a single actual invention. As the disclosure is focused on the algorithm and its benefits, the actual invention is considered to be the algorithm or the analysis and resulting data, which has no physical existence and does not effect a physical effect or change.

[43]   I maintain my view that the subject matter of claims 1-28 is prohibited under subsection 27(8) of the *Patent Act* and is not directed to patentable subject matter as it falls outside the definition of "invention" in section 2 of the *Patent Act*.

PROPOSED CLAIMS

[44]   As stated above, the Applicant submitted multiple proposed claims after the FA in an attempt to overcome the defects identified in the FA, the SOR, the PR letter, the Supp PR letter, and the first and second oral hearings. The most recent proposed claims, the fifth proposed claim will be reviewed. The fifth proposed claims have claims 1-26. From the claims on file, claim 1 was amended to include an electronic auction server involving remote trader user devices over a network; the ability of the auction server to generate a graphical user interface on the remote trader user devices; real-time notifications of the trades on user interfaces; and time limits to trade proposals that generates automatic actions based on the information received before the time limit expires. Amended independent claim 14 is similarly amended as claim 1. Claims 2-13 and 15-26 contained minor amendments for language and dependency adjustments from the claims on file.

Are the proposed claimed elements essential?

[45]   In my view, the elements of the proposed claims are essential.

[46]   Claim 1 of the fifth proposed claims is directed to a method of conducting an exchange auction involving converting financial position data to compliant trade proposals and is representative of claims 1-26. Proposed claim 1:

1. A method of conducting an exchange auction involving converting financial position data that is not processable by downstream computing systems into financial position data that is processable by downstream computing systems, the method comprising:

   conducting, by at least one electronic auction server over a network, an electronic auction involving a plurality of remote trader user devices, said remote trader user devices in electronic communication with the at least one electronic auction server via said network;

   wherein the at least one electronic auction server is configured to generate a graphical user interface (GUI) on the plurality of remote trader user devices;

   receiving, by said at least one electronic auction server, via the GUI, in response to said electronic auction, over the network, non-compliant data from at least one remote trader user device, said non-compliant data comprising financial position data defining one or more long positions and one or more short positions associated with a first financial asset;

   matching, by the at least one electronic auction server, at least one of the one or more long positions with at least one of the one or more short positions associated with said first financial asset;

   converting, by the at least one electronic auction server, the non-compliant data into the compliant data that is processable by a downstream computing system, said converting comprising:

   generating, by the at least one electronic auction server, a first proposed trade from the non-compliant data that includes the matched positions;

generating, by the at least one electronic auction server, a second proposed trade from compliant financial position data that is processable by the downstream computing system, said compliant financial position data defining one or more long positions and one or more short positions associated with a second financial asset, said second financial asset being associated with a same underlying financial asset as the first financial asset, wherein a net notional associated with the first proposed trade is equal to a net notional associated with the second proposed trade;

identifying a first user device and a second user device among the plurality of remote trader user devices associated with the first proposed trade and the second proposed trade;

generating, by the at least one electronic auction server, a real-time notification of the first proposed trade and the second proposed trade for immediate review to each of the first user device and the second user device, the real-time notification comprising updating a trade summary screen of the GUI on each of the first user device and the second user device, to display the first proposed trade and the second proposed trade together with an action indicator selectable by one or more of the first user device and the second user device;

wherein the action indicator is an opt-out indicator or an opt-in indicator;

establishing, by the at least one electronic auction server, a predetermined period of time during which the action indicator is transmittable via the GUI by one or more of the first user device and the second user device;

determining by the at least one electronic auction server, that no opt-out indicator has been received or an opt-in indicator has been

received from the first user device and the second user device within said predetermined period of time;

automatically initiating, by the at least one electronic auction server, an action comprising of:

automatically executing the first proposed trade to flatten the non-compliant financial position data;

automatically executing the second proposed trade to generate the compliant financial position data, wherein the first proposed trade is simultaneously executed with the second proposed trade; and

automatically transmitting, by the at least one electronic auction server, the compliant financial position data to the downstream processing computer system;

wherein the downstream processing computer system is a clearinghouse server configured to process compliant financial trades and reject non-compliant financial trades; and

automatically cancelling both the first proposed trade and the second proposed trade when it is determined that the opt-out indicator has been received from either of the first user device or the second user device within said predetermined period of time.

[47]   In view of the amendments made in fifth proposed claim 1, and the whole of the specification, the person skilled in the art would understand that there is no use of language indicating that any of the steps in each claim is optional, a preferred embodiment or one of a list of alternatives. Nor is there any indication in the record before us that would lead to a determination of any claimed elements being non-essential. Therefore, in my view, the computer-implemented method steps identified in the fifth proposed claim 1 are considered to be essential.

Meaning of terms

[48] During the second oral hearing, there was a discussion about the meanings of certain features. These included:

- wherein the at least one electronic auction server is configured to generate a graphical user interface (GUI) on the plurality of remote trader user devices; and

- generating, by the at least one electronic auction server, a real-time notification of the first proposed trade and the second proposed trade for immediate review to each of the first user device and the second user device, the real-time notification comprising updating a trade summary screen of the GUI on each of the first user device and the second user device, to display the first proposed trade and the second proposed trades together with an action indicator selectable by one or more of the first user device and the second user device.

[49] In regards to the first feature regarding the GUI, it was clarified that there was no discussion in the original specification as to how this would be carried out beyond sharing information with the remote trader devices. This is considered to be common computer network functionality of sharing information which can then be displayed on a GUI.

[50] In regards to the second feature regarding the real-time notification, it was also clarified that there was no discussion in the original specification about real time notifications. There is a display of information on the remote trader devices as the trading information changes. There is no specific notification beyond the updating of information on the display.

Is the fifth proposed claimed invention patentable subject matter?

[51] In my view, the subject matter of claims 1-26 is prohibited and is not patentable subject matter.

[52] With the amendments made in the fifth proposed claim 1, and in view of the whole of the specification, it appears that the invention is unchanged and is directed to a method for conducting an exchange auction that requires a conversion of financial position data that comprises:

- non-compliant data including financial position data defining one or more long and short positions;

- matching at least one long position with at least one short position;

- converting the non-compliant data by generating proposed trades involving matched and compliant financial positions;

- generating a real-time notification of the proposed trades sent to the trader devices; and

- automatically processing or canceling the trades when receiving a particular response or to a timer expiring.

[53] As stated above, the amendments add in an electronic auction server involving remote trader user devices over a network; real-time notifications of the trades on user interfaces; and time limits to trade proposals that allow for an automatic action if no feedback is received. The amendments remove executing the trade if no opt-out is received from the traders and if the trade is opted-out, and repeating the matching process.

[54] In my view, similar to the claims on file, the essential elements of the fifth proposed claim 1 form a method for an exchange auction that is able to process trades using non-compliant financial position data through a conversion process. Together, these steps represent the computer implementation of an abstract idea, theorem, or set of rules for an exchange auction.

[55] The fifth proposed claimed features are to be used on existing and widely available computers. Fifth proposed claim 1 is an abstract theorem that is

implemented on common computers and computer networks including the electronic auction server, remote trader user devices, and other computers in the network. The computers are merely used in a well-known manner, do not form a single actual invention with the abstract theorem and thus do not render the theorem patentable subject matter. The computers are merely being used to make the kind of calculations they were invented to make, to receive and manipulate data the way it was intended, as well as display those manipulations and calculations.

[56]   Accordingly, the abstract scheme for conducting an exchange auction involving converting financial position data to compliant trade proposals has no physical existence itself and does not manifest a physical effect or change. Nor does the use of the computer in this case cause it to meet the physicality requirement. Thus, in my view, the subject matter of representative fifth proposed claim 1 is prohibited under subsection 27(8) of the *Patent Act* and is not patentable subject matter as it falls outside the definition of "invention" in section 2 of the *Patent Act*.

[57]   As amended independent claim 14 is similarly amended as claim 1, the computer is also considered to be a generic computer functioning in a well-known manner. The minor amendments of dependent claims 2-13 and 15-26 also do not go beyond generic computer functions. As such, fifth proposed claims 2-26 also remain prohibited under subsection 27(8) of the *Patent Act* and remain not patentable subject matter as it falls outside the definition of "invention" in section 2 of the *Patent Act*.

[58]   It follows that the proposed claims are not considered a necessary amendment under subsection 86(11) of the *Patent Rules*.

PROCEDURAL FAIRNESS

[59]   In the response to the PR letter, the Applicant submitted that an improper test of problem-solution was applied in the FA, differing from the guidance provided in *PN2020-04*. This was also submitted at the first oral hearing.

… the Applicant submits that the PAB, and this PAB Preliminary Review, is improperly disposing of the Patent Office's statutory obligations to issue a valid Office action prior to the Patent Appeal Board undertaking its review. Specifically, Rule 86(5) states that "**the examiner must send a notice bearing the notation 'Final Action' or 'Décision finale', indicating the outstanding defects and requisitioning the applicant to amend the application in order to comply with the Act and these Rules, or to submit arguments as to why the application does not comply**" [emphasis in original]. Applicant submits that the failure to provide the Applicant with a notice under Rule 86(5) is contrary to procedural fairness and in violation of the *Patent Act*. The recent decision of the Federal Court in *Choueifaty* held that there is no legal basis in Canadian law for using a "problem-solution" approach to claims construction.

…

Accordingly, the Applicant submits that the legal test and analysis used to object to, then eventually reject, the claims in each of the Office actions of this application, is improper and non-compliant with Canadian Supreme Court of Canada jurisprudence, and the Office's guidance. The process currently being undertaken by the Board does not provide the Applicant with the original proper notice of the alleged defects in the application in accordance with Rule 86(2) of the *Patent Rules*, nor does it provide the Applicant with the procedural fairness afforded by Rules 86(5). As a result, the Applicant rejects the validity of the Patent Office's process of issuing its Preliminary Review, and requests that a notice issued under Rule 86, raising a legally valid basis for objection, be first sent to the Applicant.

[60]   As presented in the Supp PR letter:

after an FA has been written in accordance with *Patent Rule* 86(5) and the time to respond has expired, the application is sent to the Commissioner for review following *Patent Rule* 86(7). Once the application has reached the

time limitation of the FA, there is no legislative or other means to return to Examination and a review must be conducted. The PR Letter is written by the PAB to inform the Applicant of any new defects or issues, as well as to inform the Applicant of their views on the defects identified by the FA. This ensures any new court decisions and CIPO practices can be considered before a final Commissioner Decision is issued. The Applicant then has the option to provide written submissions, amendments as well as attend an oral hearing before a final recommendation is made to the Commissioner for the Commissioner Decision.

In the prosecution of this application, these rules have been followed. After the FA was written by Examination, the application was forwarded for review. The Applicant was informed, via the PR letter, of the issues before the Commissioner of Patents. The Applicant was also invited to submit written responses and attend an oral hearing, both of which the Applicant elected to do.

Additionally, as presented above, in light of the commentary of the recently released *Benjamin Moore FCA* decision, I have reviewed the reasoning presented in the PR letter. I have done this to ensure that the issues, particularly those relating to purposive construction and patentable subject matter, have been fully and properly addressed. Further, to ensure that the Applicant is given full notice of the issues to be addressed, my updated reasoning is presented in this supplemental letter and the Applicant has the opportunity to respond with written submissions and attend an oral hearing.

[61] The Applicant did not raise the issue of procedural fairness in the second oral hearing or in the subsequent submissions.

RECOMMENDATION OF THE BOARD

[62]   In view of the above, I recommend that the application be refused on the basis
that the subject matter of the claims on file is prohibited under subsection 27(8)
of the *Patent Act* and is not patentable subject matter as it falls outside the
definition of "invention" in section 2 of the *Patent Act.*

Mara Gravelle

Member

DECISION OF THE COMMISSIONER

[63]   I concur with the findings of the Board and its recommendation to refuse the application on the basis that the claims on file are prohibited under subsection 27(8) of the *Patent Act* and the subject matter of the claims on file is not patentable subject matter as it falls outside the definition of "invention" in section 2 of the *Patent Act*.

[64]   I therefore refuse, under section 40 of the *Patent Act*, 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.

Konstantinos Georgaras

Commissioner of Patents
Dated at Gatineau, Quebec
this 11 day of December, 2024.