

Citation: BGC Partners, Inc. (Re), 2024 CACP 20
Commissioner's Decision #1679
Décision du Commissaire n° 1679
Date : 2024-12-13

TOPIC: B00 Claims—Ambiguity or Indefiniteness (incomplete)
J00 Subject Matter of Applications—Meaning of Art
J10 Subject Matter of Applications—Computer Programs
J50 Subject Matter of Applications—Mere Plan

SUJET : B00 Revendications—Caractère ambigu ou indéfini (incomplet)
J00 Objet des demandes—Signification de la technique
J10 Objet des demandes—Programmes d'ordinateur
J50 Objet des demandes—Simple plan

Application No. 2554241

Demande n° 2 554 241

IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application number 2554241, having been rejected under subsection 30(3) of the *Patent Rules* (SOR/96-423), as they read immediately before October 30, 2019 (the former *Patent Rules*), 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.

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INTRODUCTION

- [1] This recommendation concerns the review of rejected patent application number 2554241, which is entitled “System and Method for Routing a Trading Order.” The patent application is owned by BGC Partners, Inc. and the Applicant is Espeed, Inc. (the Applicant). The Patent Appeal Board (the Board) has reviewed the rejected application pursuant to paragraph 199(3)(c) of the *Patent Rules*. The outstanding issues to be addressed in this review is whether the claims define patentable subject-matter and if the claims are clear and unambiguous. As explained below, my recommendation is to refuse the application.

BACKGROUND

The application

- [2] The instant application was filed under the Patent Cooperation Treaty and has an effective filing date in Canada of January 31, 2005. It was laid open to public inspection on August 11, 2005.
- [3] The instant application relates to electronic trading. More specifically, it relates to a method, apparatus, and an article of manufacture for routing trade orders.

Prosecution history

- [4] On March 1, 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 FA explained that the application was defective on the ground that claims 1-45 (claims on file) were directed to non-statutory subject-matter and therefore do not comply with section 2 of the *Patent Act* and that claims 1, 16, and 31-45 were indefinite and did not comply with subsection 27(4) of the *Patent Act*.
- [5] In a September 3, 2019 response to the FA (RFA), 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 February 19, 2020, the Board forwarded a copy of the SOR to the Applicant. On May 14, 2020, 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 former *Patent Rules* and to make a recommendation to the Commissioner as to its disposition. In a Preliminary Review letter (PR letter) dated May 5, 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* as well as claims 1, 16, and 31-45 are indefinite and do not comply with subsection 27(4) of the *Patent Act*. The PR letter offered the Applicant the opportunities to attend an oral hearing and to make further submissions.
- [9] The Applicant responded to the PR letter indicating that they did not want an oral hearing. No further correspondence was received from the Applicant.
- [10] 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 July 22, 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* as well as presenting again the reasoning as to why claims 1, 16, and 31-45 are indefinite and do not comply

with subsection 27(4) of the *Patent Act*. The Supp PR letter offered the Applicant the opportunities to attend an oral hearing and to make further submissions.

[11] The Applicant did not respond to the Supp PR letter.

ISSUES

[12] The issues are 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* and if claims 1, 16, and 31-45 are indefinite and do not comply with subsection 27(4) of the *Patent Act*.

[13] I also consider the proposed claims to determine if they would be considered necessary amendments under subsection 86(11) of the *Patent Rules*.

ARE THE CLAIMED ELEMENTS ESSENTIAL?

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

Principles

[15] 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*]).

[16] 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.

- [17] “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).
- [18] Since both interpretation of term meaning and identification of the essential elements are done in light of the relevant CGK, I must first identify the skilled person to determine their CGK.

Analysis of the current application

The skilled person and the relevant CGK

- [19] As noted in the PR letter, the FA (at page 3) characterized the skilled person as comprising “a team of market brokers or traders and computer programmers.”
- [20] As also noted in the PR letter, the FA (at page 3) identified the CGK as:

The market brokers or traders would be familiar with investment concepts and practices including the trading of financial instruments such as equities and bonds as well as the trading of options on said financial instruments, with said trading occurring inter alia through automated trading exchanges.

The computer programmers would be familiar with standard networking architectures, tailoring of trading software applications to meet specific investment product requirements, database programming, as well as common computing equipment hardware.

- [21] These characterizations were not disputed by the Applicant. I adopt them for this review.

Essential elements of the claims

- [22] The instant application includes 45 claims on file. Claim 1 is directed to a method of conducting exchanges of a trading products. Claim 16 is directed to an

apparatus for conducting the exchanges of claim 1. Claim 31 is directed to an article of manufacture which includes a computer-readable medium storing the instructions to carry out the method of claim 1. Dependent claims 2-15, 17-30, and 32-45 recite refinements of the independent claim method and define additional features of the method to carry out the exchanges. I consider independent claim 1 as illustrative of the invention:

1. A method comprising:

receiving, via a processor in a trading exchange platform, a trading order that comprises:

(i) a total amount of a trading product; and

(ii) a disclosure amount that is to be disclosed to a plurality of market centers capable of executing the trading order, in which the disclosure amount is a portion of the total amount;

routing, via the processor, a portion of the trading order to be matched with at least one internal trading order, in which the at least one internal trading order is stored in a database that is internal to the trading exchange platform;

computing, via the processor, a remaining quantity of the trading order, in which the remaining quantity of the trading order comprises the total amount minus the portion of the trading order;

identifying, via the processor, at least one market center that is capable of matching the remaining quantity of the trading order, in which the at least one market center is external to the trading platform;

receiving, from a remote device, an indication of a disclosure policy of the at least one market center, in which the disclosure policy specifies a manner for disclosing the remaining quantity of the trading order to the at

least one market center, in which the remote device and the processor are in electronic communication over a network; and

transmitting, via the processor, a second trading order comprising the remaining quantity of the trading order to the at least one market center in accordance to the disclosure policy;

determining, via the processor, that the at least one market center charges a fee for orders that remain unmatched for a length of time;

monitoring, via the processor, whether the second trading order is matched within the length of time;

in response to determining the second trading order will exceed the length of time for a fee, canceling, via the processor, the second trading order and submitting, via the processor, a third trading order that comprises the remaining quantity to the at least one market center.

- [23] In the PR letter, and similarly in the Supp 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 trading exchange components and the steps carried out by the exchange 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 components that are used for carrying out these

method steps as recited in the corresponding apparatus and article of manufacture claims.

Dependent claims 2-15, 17-30, and 32-45 recite further data options and data calculations. These features are also considered essential.

- [24] Claims 16 and 31 are the corresponding apparatus and article of manufacture claims and are considered to have corresponding elements as claim 1. I continue to presume all the elements of the claims on file as essential.

IS THE CLAIMED INVENTION PATENTABLE SUBJECT-MATTER?

- [25] In my view, the subject-matter of claims 1-45 is prohibited and is not patentable subject-matter.

Principles

- [26] 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.

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

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

- [28] *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.

- [29] 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).
- [30] *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*.
- [31] 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).
- [32] 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.

[33] 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.

[34] 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

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

[Bolding indicates added text, asterisks indicate deleted text] The independent claims on file are directed to conducting a trade exchange that requires a trade order including a total amount of trading product, a disclosure amount for market centres; routing a portion of the trading order to be matched by an internal trading order; computing a remaining quantity of the trading order as a second trading order; identifying a market centre to match the second trading order; receiving an indication of disclosure policy of a market centre; transmitting a second trading order comprising the remaining quantity to a market centre in accordance with the disclosure policy; determining the market center fees for orders that remain unmatched for a length of time; monitoring the second order for the length of time; determining the second trading order will exceed the length of time for a fee, canceling the second trading order and submitting a third trading order to a market center.

The claims on file recite a number of computer-related elements such as a computing system or platform, computing device, processor, memory, database, network, and computer-readable medium. They also recite that these elements perform computer-related steps including receiving, routing, computing, processing, calculating, and transmitting.

In my preliminary view, all these steps of representative claim 1 form a method for a trade exchange that is able to split trades; monitor for fees related to the time the trade remains unmatched; and cancel and resubmit orders to avoid the fees. Together, these steps represent the computer implementation of an abstract idea, theorem, or set of rules for a trade exchange.

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* **trade exchange** referenced in the application are considered well known computers, that are performing their intended calculations and data manipulation. The description (*page 10, line 26 – page 12, line 14* **page 13, line 26 – page 15, line 14**) describes 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 a trade exchange. 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. Instead, the actual invention appears to be an abstract scheme comprising an algorithm or set of rules for conducting a

trade exchange that is able to split trades; monitor for fees related to the time the trade remains unmatched; and cancel and resubmit orders to avoid the fees.

Accordingly, the abstract scheme for conducting a trade exchange 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 conducting a trade exchange 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 conduct a trade exchange 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 claims 16 and 31.

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 2-15, 17-30, and 32-45 which recite further data options and data calculations. The computer is used in a well-known manner, does not form part of the actual invention, and therefore these claims are also directed to an actual invention that is abstract.

- [36] As the applicant did not contest this preliminary opinion, I maintain my view that the subject-matter of claims 1-45 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*.

ARE THE CLAIMS CLEAR AND UNAMBIGUOUS?

- [37] In my view, claims on file 1, 16 and 31-45 are not clear and unambiguous.

Principles

- [38] Subsection 27(4) of the *Patent Act* requires claims to distinctly and explicitly define subject-matter:

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

- [39] In *Minerals Separation North American Corp v Noranda Mines Ltd*, [1947] Ex CR 306, 12 CPR 99 at 146, the Court emphasized both the obligation of an Applicant to make clear in the claims the ambit of the monopoly sought and the requirement that the terms used in the claims be clear and precise:

By his claims the inventor puts fences around the fields of his monopoly and warns the public against trespassing on his property. His fences must be clearly placed in order to give the necessary warning and he must not fence in any property that is not his own. The terms of a claim must be free from avoidable ambiguity or obscurity and must not be flexible; they must be clear and precise so that the public will be able to know not only where it must not trespass but also where it may safely go.

Analysis

- [40] As presented in the PR letter, and similarly in the Supp PR letter, the FA at page 7, stated that claims 1, 16 and 31:

are indefinite and do not comply with subsection 27(4) of the *Patent Act*. The expression (with emphasis) "will exceeded" (as found on the fourth last line of each of these claims) is grammatically incorrect, and introduces unnecessary ambiguity with respect to the precise subject matter being claimed.

[41] The FA also stated that claims 32-45 are indefinite as the preamble:

refers to an apparatus, however the underlying independent base claim (claim 31) is directed towards an article of manufacture. The embodiment inconsistencies of claims 32-45 relative to claim 31, introduce unnecessary ambiguity with respect to the precise subject matter being claimed.

[42] The Applicant did not dispute this in the RFA.

[43] My view is that claims on file 1, 16 and 31-45 are indefinite and do not comply with subsection 27(4) of the *Patent Act* for the reasons specified.

PROPOSED CLAIMS

[44] As stated above, the Applicant submitted in the RFA, proposed claims 1-126 in an attempt to overcome the defects identified in the FA. Compared to the claims on file, claims 1, 16, and 31-45 were amended and new claims 46-126 were added. The independent claims 1, 16, and 31 were amended to include a network, an electronic message, a market centre server, and an electronic timer to determine the time lapse for unmatched trade orders. Claims 2-15 and 16-30 remain unchanged from the claims on file. Claims 32-46 were amended to refer to the article of manufacture of claim 31.

Are the proposed claimed elements essential?

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

[46] Claim 1 of the proposed claims is representative of the proposed claims 1-45 and is directed to a method of conducting exchanges of a trading products which

comprises determining and avoiding fees associated to unmatched trading orders. Proposed claim 1:

1. A method comprising:

receiving, at a processor in a trading exchange platform connected to a network, an electronic message including a trading order that comprises:

(i) a total amount of a trading product; and

(ii) a disclosure amount that is to be disclosed to a plurality of market centers capable of executing the trading order, in which the disclosure amount is a portion of the total amount;

routing, via the processor, a portion of the trading order to be matched with at least one internal trading order, in which the at least one internal trading order is stored in a database that is internal to the trading exchange platform;

computing, via the processor, a remaining quantity of the trading order, in which the remaining quantity of the trading order comprises the total amount minus the portion of the trading order;

identifying, via the processor, at least one market center and at least one market center server that is capable of matching the remaining quantity of the trading order, in which the at least one market center is external to the trading platform and the at least one market center server is connected to the network;

receiving, at the processor from the at least one market center server over the network, an electronic message including an indication of a disclosure policy of the at least one market center, in which the disclosure policy specifies a manner for disclosing the remaining quantity of the trading order to the at least one market center;

transmitting, at the processor to the at least one market center server over the network, an electronic message including a second trading order comprising the remaining quantity of the trading order to the at least one market center in accordance to the disclosure policy;

determining, via the processor, that the at least one market center charges a fee for orders that remain unmatched for a length of time;

monitoring, by an electronic timer operable by the processor, to determine when a predetermined amount of time lapses for which the second trading order is unmatched from a time at which the second trading order is transmitted to the at least one market center server;

in response to the predetermined amount of time lapsing, transmitting, at the processor to the at least one market center server over the network, an electronic message including a cancel instruction for the second trading order at the at least one market center; and

transmitting, at the processor to the at least one market center server over the network, an electronic message including a third trading order that comprises the remaining quantity to the at least one market center.

[47] In view of the amendments made in 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 proposed claim 1 are considered to be essential.

[48] Claim 46 is representative of the proposed claims 46-126 and is directed to a method of conducting exchanges of a trading products comprising receiving a bid price and a price policy of a market centre and then determining an adjusted bid price from the price policies. Proposed claim 46:

46. A method comprising:

receiving, at a processor in a trading exchange platform connected to a network, an electronic message including a trading order that comprises:

(i) a total amount of a trading product; and

(ii) a disclosure amount that is to be disclosed to a plurality of market centers capable of executing the trading order, in which the disclosure amount is a portion of the total amount;

routing, via the processor, a portion of the trading order to be matched with at least one internal trading order, wherein the at least one internal trading order is stored in a database that is internal to the trading exchange platform;

computing, via the processor, a remaining quantity of the trading order, wherein the remaining quantity of the trading order comprises the total amount of the trading product minus the portion of the trading order;

identifying, via the processor, at least one market center and at least one market center server that is capable of matching the remaining quantity of the trading order, wherein the at least one market center is external to the trading exchange platform and the at least one market center server is connected to the network;

receiving, at the processor from the at least one market center server over the network, an electronic message including a bid price and a price policy of the at least one market center;

determining an adjusted bid price for the at least one market center based on the bid price and the price policy;

receiving, at the processor from the at least one market center server over the network, an electronic message including an indication of a

disclosure policy of the at least one market center, in which the disclosure policy specifies a manner for disclosing the remaining quantity of the trading order to the at least one market center; and

transmitting, at the processor to the at least one market center server over the network, an electronic message including the remaining quantity of the trading order to the at least one market center in accordance to the disclosure policy.

- [49] In view of the amendments made in proposed claim 46, 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 proposed claim 46 are considered to be essential.

Is the proposed claimed invention patentable subject-matter?

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

- [51] As presented in the Supp PR letter:

As stated above, the independent claims 1, 16, and 31 were amended to include a network, an electronic message, a market centre server, and an electronic timer to determine the time lapse for unmatched trade orders.

With the amendments made in the representative proposed claim 1, and in view of the whole of the specification, it appears that the invention is unchanged and is directed to conducting a trade exchange that requires a trade order including a total amount of trading product, a disclosure amount for market centres; routing a portion of the trading order to be matched by an internal trading order; computing a remaining quantity of the trading

order as a second trading order; identifying a market centre to match the second trading order; receiving an indication of disclosure policy of a market centre; transmitting a second trading order comprising the remaining quantity to a market centre in accordance with the disclosure policy; determining the market center fees for orders that remain unmatched for a length of time; monitoring the second order for the length of time; determining the second trading order will exceed the length of time for a fee, canceling the second trading order and submitting a third trading order to a market center.

In my preliminary view, similar to the claims on file, the essential steps of proposed claim 1 form a method for a trade exchange that is able to process a trade order using an internal trade and a market centre trade where unmatched market centre trades are monitored for fees leading to the cancellation of the trade order followed by the submission of an another market centre trade order. Together, these steps represent the computer implementation of an abstract idea, theorem, or set of rules for a trade exchange.

Considering representative proposed claim 46, and in view of the whole of the specification, it appears that the invention is directed to conducting a trade exchange that requires a trade order including a total amount of trading product, a disclosure amount for market centres; routing a portion of the trading order to be matched by an internal trading order; computing a remaining quantity of the trading order as a second trading order; identifying a market centre to match the second trading order; receiving a bid price and a price policy of a market centre; determining an adjusted bid price; receiving an indication of disclosure policy of a market centre; transmitting a second trading order for the remaining quantity of the trade order in accordance with the disclosure policy.

In my preliminary view, similar to the claims on file, the essential steps of proposed claim 46 form a method for a trade exchange that is able to

process a trade order using an internal trade and a market centre trade involving a disclosure policy. Together, these steps represent an abstract idea, theorem, or set of rules for a trade exchange.

The proposed claims also recite a number of computer-related elements such as a computing system or platform, computing device, server, processor, memory, database, and computer-readable medium. They also recite that these elements perform computer-related steps including receiving, routing, computing, processing, calculating, and transmitting. Similar to the claims on file, there is no suggestion in the specification that the claimed computer-related elements represent anything other than generic computer components. The computers are merely being used to make the kind of calculations and data manipulation that they were invented to make. The computers and user devices used in the trade exchange referenced in the application are considered well known computers that are performing their intended calculations and data manipulation.

Furthermore, there is no indication in the specification that the functioning of the computer is improved by the steps of the proposed claims. There is no suggestion in the specification that there were any challenges or deficiencies in the operation of the computing device to conduct a trade exchange. 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 computer elements of the proposed claims 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 conducting a trade exchange that is able to split trades; monitor for fees related to the time the trade remains unmatched; and cancel and resubmit orders to avoid the fees. Together, these steps represent the computer implementation of an abstract idea, theorem, or set of rules for conducting a trade exchange.

Accordingly, the abstract scheme for conducting a trade exchange 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 conducting a trade exchange 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 conduct a trade exchange, 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 proposed 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 proposed claims 2-15 and 17-30 remain unchanged from the claims on file. Claims 32-45 were amended to refer to the article of manufacture of claim 31. These claims 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*, for the same reasons set out above.

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 47-126 which recite further data options and data calculations. The computer is used in a well-known manner, does not form part of the actual invention, and therefore these claims are also directed to an actual invention that is abstract. Claims 47-126 are also prohibited under

subsection 27(8) of the Patent Act and the subject matter of these claims remain not patentable subject matter as it falls outside the definition of “invention” in section 2 of the Patent Act.

- [52] In my view, similar to the claims on file, the actual invention of proposed claim 46 form a method for a trade exchange that is able to process a trade order using an internal trade and a market centre trade involving a disclosure policy. Together, these steps represent an abstract idea, theorem, or set of rules for a trade exchange.
- [53] As the applicant did not contest this preliminary opinion, I maintain my view that the subject-matter of claims 1-126 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*.

Are the proposed claims clear and unambiguous?

- [54] As presented in the Supp PR letter, my view is that proposed claims 1-126 are definite, clear and unambiguous.
- [55] The Summary of Reasons at page 3, stated that the proposed claims:
- overcome indefiniteness defects identified with instant claims 1, 16, 31-45 as the lack of clarity stemming from grammatical errors and inconsistent underlying base claims has been addressed.
- [56] For the same reasons, my view is that the proposed claims are not indefinite and do comply with subsection 27(4) of the Patent Act.

Conclusions on the proposed claims

- [57] As the subject-matter of claims 1-126 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*, it follows that proposed claims 1 to 126 are not preliminarily considered a necessary amendment under

subsection 86(11) of the *Patent Rules*.

RECOMMENDATION OF THE BOARD

[58] 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*, and
- claims 1, 16, 31-45 on file are indefinite as they do not comply with subsection 27(4) of the *Patent Act*.

[59] Further, the proposed claims do not overcome the non-patentable subject-matter defect and therefore the introduction of these claims does not constitute a “necessary” amendment pursuant to subsection 86(11) of the *Patent Rules*.

Mara Gravelle

Member

DECISION OF THE COMMISSIONER

[60] 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*; and
- claims 1, 16, 31-45 on file are indefinite as they do not comply with subsection 27(4) of the *Patent Act*.

[61] Further, the proposed claims do not overcome the non-patentable subject-matter defect and therefore the introduction of these claims does not constitute a “necessary” amendment pursuant to subsection 86(11) of the *Patent Rules*.

[62] 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 13th day of December, 2024.