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Commissioner's Decision #1672

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J10

Subject Matter of Applications–Meaning of Art
Subject Matter of Applications–Computer Programs

SUJET : J00
J10

Objet des demandes–Signification de la technique
Objet des demandes–Programmes d'ordinateur

Application No. 2599952

Demande n° 2 599 952

IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application number 2599952, having been rejected under subsection 30(3) of the *Patent Rules* (SOR/96-423) as they read immediately before October 30, 2019, has subsequently 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 2599952, which is entitled “System and method for betting on a subset of participants in an event according to multiple groups” and is owned by Cantor Index LLC. A review of the rejected application has been conducted by the Patent Appeal Board pursuant to paragraph 199(3)(c) of the *Patent Rules* (SOR/2019–251) (“the *Patent Rules*”).
- [2] As explained below, the recommendation of the Patent Appeal Board is that the Commissioner of Patents refuse the application.

BACKGROUND

The application

- [3] Canadian patent application 2599952 was filed under the provisions of the Patent Cooperation Treaty and has an effective filing date of March 9, 2006. It was laid open to public inspection on September 14, 2006.
- [4] The application relates to systems and methods for betting on a subset of participants in an event according to multiple groups. The methods involve receiving combination group bets on an event specifying subsets of participants, dynamically determining odds for each subset based on received bets, determining payouts upon event resolution, and facilitating payment processing.

Prosecution history

- [5] On September 5, 2019, a Final Action was written under subsection 30(4) of the *Patent Rules* (SOR/96–423) as they read immediately before October 30, 2019. The Final Action indicated that claims 1 to 26 on file at the time of the Final Action (“claims on file”) define unpatentable subject-matter and do not comply with section 2 of the *Patent Act*.

- [6] The Response to the Final Action, dated March 2, 2021, disagreed with the assessment in the Final Action and submitted further arguments to support the patentability of the claims on file. The Applicant also proposed claims 1 to 18 (“proposed claims”), submitting that they too complied with section 2 of the *Patent Act*.
- [7] On May 6, 2022 the application was forwarded to the Patent Appeal Board for review under paragraph 199(3)(c) of the *Patent Rules* along with a Summary of Reasons that explained that the rejection was maintained. Notably, subsequent to the Final Action, the Office updated its guidance in determining whether the subject-matter defined by a claim is patentable subject-matter in the following Patent Notice: “Patentable Subject-Matter under the Patent Act” (CIPO, November 2020) [*PN2020-04*]. The Summary of Reasons applied the guidance in *PN2020-04* and maintained that the claims on file are directed to unpatentable subject-matter but cited subsection 27(8) of the *Patent Act* as the relevant legal authority. The proposed claims submitted with the Response to the Final Action were also considered to define unpatentable subject-matter contrary to subsection 27(8) of the *Patent Act*.
- [8] In a letter dated May 10, 2022, the Patent Appeal Board forwarded a copy of the Summary of Reasons to the Applicant and requested that they confirm their continued interest in having the application reviewed.
- [9] In a letter dated June 27, 2022, the Applicant confirmed their interest in having the review proceed.
- [10] The undersigned was assigned to review the rejected application under paragraph 199(3)(c) of the *Patent Rules*. On April 15, 2024, I sent a Preliminary Review letter which detailed my preliminary analysis and opinion that the actual inventions of claims 1 to 26 on file do not fit within any category of invention in section 2 of the *Patent Act*.
- [11] In addition, the Preliminary Review letter notified the Applicant, in accordance with subsection 86(9) of the *Patent Rules*, that I also considered that the claims on file defined subject-matter prohibited by subsection 27(8) of the *Patent Act*.

- [12] The Preliminary Review letter also noted that the proposed claims appeared to be directed to non-patentable subject-matter, both falling outside the definition of invention of section 2 of the *Patent Act* and prohibited by subsection 27(8) of the *Patent Act*. The proposed claims were also considered to lack novelty in view of a prior disclosure from the Applicant.
- [13] Finally, the Preliminary Review letter provided the Applicant with an opportunity to make oral and/or written submissions.
- [14] In a letter dated April 29, 2024, the Applicant declined the opportunity for a hearing and indicated that they did not wish to provide further written submissions.

THE ISSUES

- [15] In view of the above, the following issues are considered in this review:
- whether claims 1 to 26 on file encompass subject-matter outside the definition of invention and do not comply with section 2 of the *Patent Act*; and
 - whether claims 1 to 26 define subject-matter prohibited by subsection 27(8) of the *Patent Act*.
- [16] In addition, the proposed claims submitted with the Response to the Final Action have also been considered.

PURPOSIVE CONSTRUCTION

Legal background

- [17] 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*] and *Whirlpool Corp v Camco Inc*, 2000 SCC 67 at para 43 [*Whirlpool*]. Purposive construction is performed from the point of view of the person skilled in the art in

light of the relevant common general knowledge, considering the whole of the disclosure including the specification and drawings: *Free World Trust* at paras 31, 44, 51 to 52 and 55 to 60; *Whirlpool* at paras 45 to 49 and 52 to 53; *PN2020-04* at Purposive Construction [*PN2020-04*].

- [18] 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 or not 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 person skilled in the art that a variant has a material effect upon the way the invention works.
- [19] As indicated under Purposive Construction in *PN2020-04*, “all elements set out in a claim are presumed essential, unless it is established otherwise or is contrary to the language used in the claim.”
- [20] Since both the interpretation of term meaning and the identification of the essential elements are done in light of the relevant common general knowledge, the person skilled in the art must first be identified to determine their common general knowledge: *Manual of Patent Office Practice (CIPO) [MOPOP]* at §12.02.01, revised June 2015.

Analysis

- [21] The Preliminary Review letter, on pages 5 to 8, stated the following with regard to the identity of the person skilled in the art and their expected common general knowledge:

The person skilled in the art and the relevant common general knowledge

The Final Action, on page 2, identifies the person skilled in the art and the relevant common general knowledge in view of the teachings of the description:

The Person Skilled in the Art

One skilled in the art would be one familiar and versed in the logistics of wagering/betting systems, networks and software associated with such (page 1).

Common General Knowledge

Relevant common general knowledge in the art would include:

- knowledge of betting and wagering systems in horse races and sporting events (group [betting]) (page 1)
- knowledge of pari-mutuel betting systems, commissions and take-outs (page 1)

The Response to the Final Action did not contest or comment on these characterizations of the person skilled in the art and their relevant common general knowledge. Further, the Applicant does not propose any additional considerations with regard to either the person skilled in the art or the relevant common general knowledge in their response.

The Summary of Reasons, on page 2, presented the same identification of the person skilled in the art and their relevant common general knowledge as found in the Final Action.

Regarding the person skilled in the art, several court decisions have provided additional context for their identification. For example, the Supreme Court of Canada explained that although the person skilled in the art is deemed to have no scintilla of inventiveness or imagination, a patent specification is addressed to “skilled individuals sufficiently versed in the art to which the patent relates to enable them on a technical level to appreciate the nature and description of the invention”: *Whirlpool* at para 53. Moreover, “in the case of patents of a highly technical and scientific nature, that person may be someone possessing a high degree of expert scientific knowledge and skill in the particular branch of science to which the patent relates”:

Consolboard v MacMillan Bloedel (Sask) Ltd, [1981] 1 SCR 504 at page 525.

In addition, the person skilled in the art can represent a composite of scientists—highly skilled and trained persons who conduct scientific research to advance knowledge in an area of interest—and researchers: *Bayer Aktiengesellschaft v Apotex Inc* [1995] 60 CPR (3d) 58 at page 79:

The notional skilled technician can be a composite of scientists, researchers and technicians bringing their combined expertise to bear on the problem at hand: “This is particularly true where the invention relates to a science or art that transcends several scientific disciplines.” (Per Wetston J. in *Mobil Oil Corp. v. Hercules Canada Inc.* (unreported, September 21, 1994, F.C.T.D., at p. 5 [now reported 57 C.P.R. (3d) 488 at p. 494, 82 F.T.R. 211].)

With the above considerations in mind and having reviewed the specification as a whole, I consider that the characterization of the person skilled in the art presented in the Final Action and Summary of Reasons is reasonable. For example, page 1 of the present description identifies that “[t]his invention relates in general to betting on events and, more particularly, to a system and method for betting on a subset of participants in an event according to multiple groups.” Further, the subject-matter of the claims on file relates to receiving combination group bets on an event specifying subsets of participants, dynamically determining odds for each subset based on received bets, determining payouts upon event resolution, and facilitating payment processing.

Regarding the identification of the common general knowledge, it is well established that the common general knowledge is limited to knowledge which is generally known by persons skilled in the field of art or science to which a patent relates: *Apotex Inc v Sanofi–Synthelabo Canada Inc*, 2008 SCC 61 at para 37 [*Sanofi*]; *Free World Trust* at para 31. Accordingly, the common general knowledge is with respect to the subset of patents, journal articles and technical information which is generally acknowledged by

persons skilled in the art as forming part of the common general knowledge in the field to which a patent relates.

Established reference works (such as textbooks, review articles, handbooks, etc.) or demonstrated commonality of certain knowledge in a number of disclosures in the field are relevant to the inquiry: *MOPOP* at §12.02.02c, revised October 2019.

Furthermore, it is my preliminary view that information in the present specification may be evidence of the common general knowledge as it could be reasonable to consider general or broadly worded assertions of conventional practice or knowledge as common general knowledge: *Corning Cable Systems LLC v Canada (Attorney General)*, 2019 FC 1065 and *Newco Tank Corp v Canada (Attorney General)*, 2015 FCA 47.

Having reviewed the specification, I am of the preliminary view that the information regarding betting and wagering systems in horse races and sporting events as set out in the Final Action and Summary of Reasons would have been generally known by the person skilled in the art as defined above who is “sufficiently versed in the art to which the patent relates to enable them on a technical level to appreciate the nature and description of the invention”: *Whirlpool* at para 53.

In addition, I preliminarily consider that the relevant common general knowledge includes the infrastructure and functionality conventionally used to interface with betting systems, as well as the design, implementation, operation and maintenance of computer-implemented betting systems, networks and software. This is consistent with the teaching in the Background of the description that “[v]arious types of betting products or systems are available for various types of sporting events” [...] “[f]or example, pari-mutuel betting systems are commonly used in North America (and other various places throughout the world) for betting on horse races.” Likewise, the limited detail in the specification (e.g. pages 2, 6, 9 to 14 and Figure 1) concerning implementation of the system for betting on a subset of

participants in an event according to multiple groups suggests that such implementation must be within the grasp of the person skilled in the art.

- [22] In the absence of submissions from the Applicant, I adopt the above characterizations of the person skilled in the art and the relevant common general knowledge for my final analysis.

The claims on file

- [23] The Preliminary Review letter, on pages 8 to 10, summarized the content of the claims on file and expressed my preliminary view that their meaning and scope would have been clear to the person skilled in the art:

There are 26 claims on file. Independent claims 1, 2 and 4 on file are directed to computer-implemented methods for managing combination group bets on subsets of event participants and independent claim 24 is directed to an apparatus for a gaming system for managing combination group bets on subsets of event participants. Claim 1 is representative and reads as follows:

1. A method of operating a gaming system over a network with interfaces of computing devices, the method comprising:

at a network interface of a computing device of the gaming system, receiving, from a network interface of a computing device of a bettor, data representing a combination group bet from the bettor, the combination group bet having first and second group bets for an event having a set of participants, wherein:

the first group bet comprises a bet that any one participant from among a first subset of the participants in the event will win the event, and

the second group bet comprises a bet that any one participant from among a second subset of the participants in the event will win the event;

the participants in the first and second subsets left open at the time that the bet is placed, the computing device of the gaming system providing a data representation to a display interface of the computing device of the bettor of a definition by which participants will be allocated to the subsets at a time after the bet is placed, the two subsets to be disjoint from each other, the payout amount for the combination group bet to be based at least in part on the amounts bet on the participants, and whether the winning participant is in one of the subsets, and if so, which subset of participants includes the winning participant; and

dynamically determining by a processor of the gaming system in substantially real time odds for each participant in the first and second subsets of participants to win the event based on any bets received by the gaming system as the bets are received;

when a winner of the event is identified, by the computing device of the gaming system, transforming data to calculate a payout for the combination group bet, and fixing the payout amounts in memory of the computing device of the gaming system,

wherein an odds payout for at least one of the group bets is fixed at the time, or substantially at the time, that the group bet is placed;

receiving, at the computing device of the gaming system, via a betting system interface of a self-serving machine, an electronic message including data representing payment associated with the combination group bet, in response to physical activation of payment entry at the self-service machine; and

transmitting, from the computing device of the gaming system, via the betting system interface of the self-serving machine, an electronic command to cause dispense from self-serving machine a printout of payment.

Independent claim 2 on file is similar to claim 1 on file but includes the additional feature that at least one of the group bets specifies conditions for identifying subsets of participants at the time of the bet placement, delaying the final determination of the specific participants within those subsets until later.

Independent claim 4 on file is similar to claim 1 on file but includes the additional feature that odds for at least one participant winning the event are determined when the group bet is received, and the payout amount for the group bet is influenced by these odds.

Independent claim 24 on file describes a system to implement the method of claim 1 on file.

The dependent claims on file recite additional features of the methods for managing group bets on subsets of event participants such as applying commission rates to the combination group bet, allowing participants of group bets to be designated by the bettor or event sponsor, ensuring consistent payouts regardless of winning participants, potential exclusion of certain participants, operation within a pari-mutuel system, and various payout determination methods based on win bets and participant allocations.

Meaning of the terms

As indicated above, purposive construction is performed from the point of view of the person skilled in the art in light of their relevant common general knowledge and includes interpreting the meaning of the terms of a claim.

There is no indication in the prosecution record of any issues with respect to the claim language, for example, the meaning of terms or claim ambiguity. The claims on file do not appear to include any terms that would be unfamiliar to the person skilled in the art in light of their relevant common general knowledge. In my preliminary view the person skilled in the art would readily understand the claim language and its meaning.

[24] In the absence of submissions from the Applicant, I adopt the above views for my final analysis.

Essential elements

[25] The Preliminary Review letter, on pages 10 to 11, stated the following with regard to the elements in the claims that the person skilled in the art would consider to be essential:

Page 2 of the Summary of Reasons specifies, in accordance with *PN2020-04*: "As there is no indication otherwise in the claims, all elements of claims 1-26 are essential."

As mentioned above, whether or not 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 person skilled in the art that a variant has a material effect upon the way the invention works.

With the above considerations in mind and having reviewed the specification as a whole, it is my preliminary view that the person skilled in the art reading claims 1 to 26 would not view the individual method steps or computer-related elements as either optional or non-essential based on the claim language itself. Likewise, it is my preliminary view that the person skilled in the art would recognize that the use of a computerized system to implement the method steps in the claims on file was not omissible or capable of substitution.

Therefore, I preliminarily agree with the assessment in the Summary of Reasons and consider all of the elements in the claims on file to be essential.

[26] In the absence of submissions from the Applicant, I adopt the above identification of the claim elements that are essential for my final review.

PATENTABLE SUBJECT MATTER

Legal background

[27] 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.

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

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

[29] *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.

[30] 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 *Canada (Attorney General) v Benjamin Moore & Co*, 2023 FCA 168 at para 68 [*Benjamin Moore*], this determination is in line with that Court's statement in *Schlumberger Canada Ltd v Commissioner of Patents*, [1982] 1 FC 845 (CA) at 847 [*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 and 66.

- [31] However, *Amazon*, at para 44, cautions 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*.
- [32] 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 and 69. To illustrate this point, *Amazon* refers to *Schlumberger*, where the claims “were not saved by the fact that they contemplated the use of a physical tool, a computer, to give the novel mathematical formula a practical application”: *Amazon* at para 69.
- [33] The patentable subject-matter concerns regarding the well-known use of a computer to process an algorithm, illustrated by *Schlumberger*, are outlined 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.

- [34] 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* at paras 69 to 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* at para 89) that is ultimately measured against the physicality requirement.
- [35] As noted in *Benjamin Moore* 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

- [36] The Preliminary Review letter, on pages 14 to 18, explained that in my preliminary view, claims 1 to 26 on file define unpatentable subject-matter, falling outside the categories of invention defined in section 2 of the *Patent Act* and prohibited by subsection 27(8) of the *Patent Act*:

The Summary of Reasons, on pages 2 to 3, explains that the claims on file define an actual invention that is not patentable subject-matter:

As is evident from the claims themselves and confirmed by reference to the rest of the specification considered in light of the relevant CGK, the data input, output, and storage steps of the claims represent generic input, output, and storage steps of a computer-implemented process.

In such a case, all of the essential elements correspond only to the processing of data to obtain better results by means of a generic

computer. It is therefore necessary to ascertain whether the computer-implemented steps/computer form part of the actual invention. There is no evidence that the functioning of the computer is being improved by applying an improved wagering scheme to provide group bets in which a bettor no longer needs to make several separate bets which tie up the betting system and increase the total pool of wagers on an event. This merely relates to data input, data manipulation according to the betting scheme, storage, and output of information in the form of a printed voucher. Therefore, the input, output and storage processing steps do not form part of a single actual invention. As the disclosure is focused on the placing of group bets, the odds for each participant to win based on the allocation of group bets, the group betting scheme, and pay-outs; the actual invention is considered to be mere calculations, the application of rules, and the storage and output of information, which has no physical existence and does not manifest a discernible effect or change.

Claims 1-26 define an actual invention that is excluded subject-matter under subsection 27(8) of the Patent Act and is not patentable subject-matter.

Having reviewed the claims on file, I preliminarily consider "art" to be the most relevant category of invention for the methods of claims 1 to 23. The most relevant category for the systems of claims 24 to 26 would be "machine" or "manufacture."

Starting with independent claim 1, in my preliminary view, the actual invention in this claim appears to be limited to an abstract algorithm for managing combination group bets on subsets of event participants comprising the following data manipulation steps and abstract rules:

- receiving data representing a combination group bet from the bettor, the combination group bet having first and second group bets for an event having a set of participants, wherein: the first group bet comprises a bet that any one participant from among a first subset of the participants in

the event will win the event, and the second group bet comprises a bet that any one participant from among a second subset of the participants in the event will win the event; the participants in the first and second subsets left open at the time that the bet is placed;

- providing a data representation of a definition by which participants will be allocated to the subsets at a time after the bet is placed, the two subsets to be disjoint from each other, the payout amount for the combination group bet to be based at least in part on the amounts bet on the participants, and whether the winning participant is in one of the subsets, and if so, which subset of participants includes the winning participant;
- dynamically determining odds for each participant in the first and second subsets of participants to win the event based on any bets received;
- identifying event winners;
- transforming data to calculate a payout for the combination group bet;
- storing the payout amounts, wherein an odds payout for at least one of the group bets is fixed at the time, or substantially at the time, that the group bet is placed;
- receiving a message including data representing payment associated with the combination group bet; and
- transmitting a command to dispense payment.

Although the claim recites various computer-related elements, such as computing devices and network interfaces, the mere fact that these elements are essential elements does not necessarily mean that the claimed invention is directed to patentable subject-matter.

As noted in the Summary of Reasons, there is no suggestion in the specification that the claimed computer-related elements represent anything

other than generic computer components. Likewise, there is no suggestion in the specification that the claimed series of steps involving data manipulation and rules for calculating odds on participants and determining payout amounts for winning bets performed by these elements represent anything other than well-known functions of generic computer components, or that the functioning of the computer is being improved by applying an improved wagering scheme for managing combination group bets on a subset of participants in an event.

Although pages 3 and 4 of the description indicate that embodiments of the present betting system may benefit from freeing up resources within the betting system for processing bets faster and allowing other bets to be made, there is no indication in the specification that the functioning of the computer is actually improved by the claimed steps. Similarly, there is no suggestion in the specification that the claimed computer-related steps performed by these elements represent anything other than well-known functions of generic computer components. Indeed, the description of the computer network of Figure 1, set out at pages 6 to 14, is one of generic computer-related network components.

Further, as indicated on pages 3 and 4 of the description, the use of the claimed wagering scheme is designed to manage bets on an event by allowing a bettor to make a group bet on a subset of participants in an event instead of placing individual bets on each participant. There is no suggestion in the description that changing the wagering rules addresses any challenges or deficiencies in the functionality or performance of the computer systems, beyond their role in executing the rules and processes. Specifically, there is no indication that changing the wagering rules targets issues such as improving memory usage or overall computer speed in a general computing context.

As stated in *Benjamin Moore* at para 94, "if the only new knowledge lies in the method itself, it is the method that must be patentable subject matter. If, however, the new knowledge is simply the use of a well-known instrument

(a book or a computer) to implement this method, then it will likely not fall under the definition found at section 2 without something more to meet the requirement described at paragraph 66 of *Amazon*". In the present case, the computer elements as claimed are merely being used to make the kind of generic data manipulations they are known to make: see *Schlumberger*. There is nothing in claim 1 on file to suggest that the computer elements are used beyond well-known generic data processing operations. Therefore, it is my preliminary view that the "new knowledge" or "discovery" does not include the computer implementation, and the computer elements do not form part of the actual invention.

In my preliminary view, the actual invention of claim 1 is limited to an abstract algorithm for managing group bets on a subset of participants in an event comprising data manipulation steps and abstract rules, for calculating odds on participants and determining payout amounts for winning bets. It follows that the actual invention, new knowledge or discovery of claim 1 is directed to an abstract idea that does not satisfy the physicality requirement as set out in *Amazon* and *PN2020-04*.

Independent claims 2 and 4 on file are similar to claim 1 on file but set out various factors that may be used as parameters in the algorithms for managing group bets on a subset of participants in an event, which merely represent variations of the abstract information and steps used in the algorithms.

Independent claim 24 on file describes an apparatus to implement the method of claim 1. In my preliminary view, the generic computer-related components specified in claim 24 would not satisfy the physicality requirement for the same reasons detailed above for claim 1.

Furthermore, in my preliminary view, the additional features recited in the dependent claims on file, such as applying commission rates to the combination group bet, allowing participants of group bets to be designated by the bettor or event sponsor, ensuring consistent payouts regardless of

winning participants, potential exclusion of certain participants, operation within a pari-mutuel system, and various payout determination methods based on win bets and participant allocations represent variations in the parameters of algorithms for managing group bets on a subset of participants in an event which do not change the nature of the actual inventions. Therefore, it is my preliminary view that the dependent claims do not add any features that would satisfy the physicality requirement and render the claims patentable.

In light of the above, it is my preliminary view that, although claims 1 to 26 on file appear on their face to be directed to patentable categories of invention, the actual inventions of these claims are in fact directed to a series of abstract data manipulations and rules that have no physical existence and do not fit within any category of invention in section 2 of the *Patent Act*. Furthermore, since the abstract data operations and rules are akin to a “mere scientific principle or abstract theorem,” they are also prohibited from patentability by subsection 27(8) of the *Patent Act*.

[37] In the absence of submissions from the Applicant, I adopt the above reasons here. Although claims 1 to 26 on file appear on their face to be directed to patentable categories of invention, their actual inventions are directed to a series of abstract data manipulations and rules. Such actual inventions do not fit within any category of invention in section 2 of the *Patent Act*. Furthermore, since the abstract data operations and rules are akin to a “mere scientific principle or abstract theorem,” they are also prohibited from patentability by subsection 27(8) of the *Patent Act*.

DO THE PROPOSED CLAIMS REMEDY THE DEFECTS?

[38] As indicated above, the Response to the Final Action included proposed claims 1 to 18. Proposed claims 1 to 18 are directed to methods for managing group bets on a subset of participants in an event, systems to execute said methods and articles of manufacture storing instructions to execute said methods.

[39] The Preliminary Review letter, on pages 19 to 21, explained that in my preliminary view, proposed claims 1 to 18 would still define unpatentable subject-matter, falling outside the categories of invention defined in section 2 of the *Patent Act* and prohibited by subsection 27(8) of the *Patent Act*:

According to page 3 of the Summary of Reasons, proposed claims 1 to 18 would still define an invention that is not patentable subject-matter:

Regarding the last proposed amendments and remarks dated March 2, 2021, the applicant submits that the present claims are directed towards an improvement in the operation of a computer. For example, by providing the ability for determining whether to generate signals to cause a physical dispense of the amount of the group bet pay-out at a physical dispense payment interface in communication with a self-service machine. The applicant submits that these techniques help controller commands and transactions being transmitted over the network and control computer workload including computer resources such as memory resources, processor resources, and network resources such as network bandwidth.

However, newly proposed claims 1-18 are still defective as in they define an invention that is excluded subject-matter under subsection 27(8) of the Patent Act and is not patentable subject-matter. The proposed claims are specifying the physical dispensation of the amount of the group bet via electronic signals. The physical dispensation of the amount is a generic output of a computer-implemented process. It is standard that outputs are dependent on command signals that are issued when necessary. This does not imply that the computer performance has been improved and nor has this been demonstrated. Thus, the functioning of the computer is not being changed.

Having reviewed the proposed claims, I preliminarily consider “art” to be the most relevant category of invention for the methods of proposed claims 1 to 9. The most relevant category for the systems of proposed claims 10 to 15 and the articles of manufacture of proposed claims 16 to 18 would be “machine” or “manufacture”.

Starting with independent proposed claim 1, in my preliminary view, the actual invention in this claim appears to be limited to an abstract algorithm for managing group bets on subsets of event participants comprising the following data manipulation steps and abstract rules:

- receiving one or more group bets, each group bet designating a corresponding subset of the set of participants in the event, the subset including a plurality of but less than all participants in the event, and being a bet that pays if any one of the corresponding designated subset wins the event, the pay amount being substantially the same whichever participant of the designated subset is the winner and independent of finishes other than the winner;
- receiving data representing results of the event identifying a winning participant from the set of participants;
- receiving data representing payment associated with one or more bets;
- determining data representing an amount of a group bet payout for at least one of the group bets based on the group bets designated subsets of which the winning participant is a member; and
- determining whether to generate a signal to dispense the amount of the group bet payout.

As noted in the Summary of Reasons, the claim refers to generic computer inputs and outputs to execute a series of steps involving data manipulation and rules for determining payout amounts for winning bets. This does not

imply that the computer performance has been improved nor has this been demonstrated.

In my preliminary view, I agree with the Summary of Reasons that the physical dispensation of the amount of the group bet payout is a generic output of a computer-implemented process. In addition, the betting system platform interfaced with a self-service machine are generic computer-related elements: see pages 9 to 10 of the description and Figure 1. The use of generic computer inputs and outputs in proposed claim 1 would not satisfy the physicality requirement for the same reasons detailed above with respect to the claims on file.

Likewise, the generic computer-related elements specified in the computer system of proposed independent claim 10 and the generic computer-readable memory specified in the article of manufacture of proposed independent claim 16 would not satisfy the physicality requirement for the same reasons detailed above with respect to the claims on file.

With respect to proposed dependent claims 2 to 9, 11 to 15, 17 and 18, the additional features recited in these claims represent variations in the parameters of algorithms for managing group bets on a subset of participants in an event which do not change the nature of the actual inventions. Therefore, it is my preliminary view that the proposed dependent claims do not add any features that would satisfy the physicality requirement and render the claims patentable.

In light of the above, it is my preliminary view that, although proposed claims 1 to 18 appear on their face to be directed to a patentable category of invention, the actual inventions of these claims are in fact directed to non-patentable subject-matter that would fall outside the definition of invention of section 2 of the *Patent Act* [and] would be prohibited by subsection 27(8) of the *Patent Act*.

[40] In the absence of submissions from the Applicant, I adopt the above reasons here. Although proposed claims 1 to 18 appear on their face to be directed to

patentable categories of invention, their actual inventions are directed to a series of abstract data manipulations and rules. Such actual inventions do not fit within any category of invention in section 2 of the *Patent Act* and would be prohibited by subsection 27(8) of the *Patent Act*.

- [41] The Preliminary Review letter cited the following prior art document as anticipating the subject-matter of proposed claims 1 to 18:

D1 CA2521159 Amaitis et al. November 11, 2004

LEGAL BACKGROUND

- [42] Paragraph 28.2(1)(a) of the *Patent Act* requires the applicant to not have disclosed claimed subject-matter more than a year before the filing of the application:

28.2(1) The subject-matter defined by a claim in an application for a patent in Canada (the “pending application”) must not have been disclosed

(a) before the one-year period immediately preceding the filing date or, if the claim date is before that period, before the claim date by the applicant, or by a person who obtained knowledge, directly or indirectly, from the applicant, in such a manner that the subject-matter became available to the public in Canada or elsewhere;

[...].

- [43] In *Apotex Inc v Sanofi–Synthelabo Canada Inc*, 2008 SCC 61 at paras 24 to 29 [*Sanofi*], the Supreme Court of Canada clarified that there are two separate requirements that must be satisfied in order to show that a prior art document anticipates a claimed invention: prior disclosure and enablement.

- [44] The prior disclosure requirement means that the prior art must disclose subject-matter which, if performed, would necessarily result in infringement of the invention as claimed. It is not necessary for the person performing the subject-

matter to know they are infringing: *Sanofi* at para 25, citing a reference from *Synthon B.V. v SmithKline Beecham plc*, [2006] 1 All ER 685, [2005] UKHL 59 at para 22 [*Synthon*]:

[W]hether or not it would be apparent to anyone at the time, whenever subject matter described in the prior disclosure is capable of being performed and is such that, if performed, it must result in the patent being infringed, the disclosure condition is satisfied.

[45] Further, at this stage, there is no room for trial and error or experimentation by the person skilled in the art. The prior art is simply read “for the purposes of understanding it”: *Sanofi* at para 25, citing *Synthon*.

[46] The enablement requirement means that the person skilled in the art would have been able to perform the invention as claimed without undue burden. Unlike the prior disclosure stage, at this stage the person skilled in the art is assumed to be willing to make trial and error experiments to get it to work: *Sanofi* at paras 26 to 27.

ANALYSIS

[47] The Preliminary Review letter, on pages 22 to 24, explained that in my preliminary view, proposed claims 1 to 18 are directed to subject-matter that was disclosed and enabled in D1:

With regard to proposed claim 1, D1 also discloses and enables a method and system for managing bets, including both win bets and group bets, on events with a set of participants. The method and system allows a bettor to place bets on subsets of participants and win the bet if any participant in the subset wins the event. D1 also discloses the allocation of payouts in a pari-mutuel betting system. More specifically, D1 discloses and enables a computer-implemented method comprising the steps of:

- receiving one or more group bets at a computer system, each group bet designating a corresponding subset of the set of participants in the event, the subset including a plurality of but less than all participants in the

event (D1, page 1, lines 24 to 29), and being a bet that pays if any one of the corresponding designated subset wins the event, the pay amount being substantially the same whichever participant of the designated subset is the winner and independent of finishes other than the winner (D1, page 2, lines 17 to 22);

- receiving at the computer system, data representing results of the event identifying a winning participant from the set of participants (D1, page 1, lines 29 to 30);
- receiving, at the computer system, data representing payment associated with one or more bets (D1, page 1, lines 24 to 25);
- determining by the computer system, data representing an amount of a group bet payout for at least one of the group bets based on the group bets designated subsets of which the winning participant is a member (D1, page 1, line 30 to page 2, line 2); and
- determining, by the computer system, whether to generate electronic signals to cause a physical dispense of the amount of the group bet payout at a physical dispense payment interface in communication with a self-service machine (D1, page 6, line 6 to page 7, line 29).

Likewise, the generic computer-related elements specified in the computer system of proposed independent claim 10 and the generic computer-readable memory specified in the article of manufacture of proposed independent claim 16 are disclosed and enabled by D1: see page 2, lines 3 to 13 and the description of Figure 1.

With respect to proposed dependent claims 2 to 9, 11 to 15, 17 and 18, in my preliminary view the additional features recited in these claims are variations in the parameters of algorithms for managing group bets on a subset of participants in an event that are also disclosed and enabled by D1: see page 1, line 24 to page 3 line 4 and the description of Figure 4.

Notably, proposed claims 1 to 18 are identical to proposed claims 1 to 18 that were submitted in the Response to the Final Action for D1 dated February 28, 2020.

Therefore, it is my preliminary view that proposed claims 1 to 18 are directed to subject-matter that was disclosed and enabled in D1 and would not comply with paragraph 28.2(1)(a) of the *Patent Act*.

[48] In the absence of submissions from the Applicant, I adopt the above reasons here. Proposed claims 1 to 18 are directed to subject-matter that was disclosed and enabled in D1 and would not comply with paragraph 28.2(1)(a) of the *Patent Act*.

SUMMARY FOR PROPOSED CLAIMS

[49] In view of the foregoing, I conclude that the proposed amendments do not meet the requirements of a necessary amendment under subsection 86(11) of the *Patent Rules*.

CONCLUSIONS

[50] Claims 1 to 26 on file define unpatentable subject-matter, falling outside the categories of invention defined in section 2 of the *Patent Act* and prohibited by subsection 27(8) of the *Patent Act*.

[51] The proposed claims would not overcome the patentable subject-matter defect, are further anticipated by D1, and are therefore not considered a “necessary” amendment for compliance with the *Patent Act* and *Patent Rules* as required by subsection 86(11) of the *Patent Rules*.

RECOMMENDATION OF THE BOARD

[52] In view of the above, I recommend that the application be refused on the grounds that:

- claims 1 to 26 on file encompass subject-matter outside the definition of invention and do not comply with section 2 of the *Patent Act*; and
- claims 1 to 26 define subject-matter prohibited by subsection 27(8) of the *Patent Act*.

Christine Teixeira

Member

DECISION OF THE COMMISSIONER

[53] I agree with the findings of the Patent Appeal Board and its recommendation to refuse the application on the grounds that:

- claims 1 to 26 on file encompass subject-matter outside the definition of invention and do not comply with section 2 of the *Patent Act*; and
- claims 1 to 26 define subject-matter prohibited by subsection 27(8) of the *Patent Act*.

[54] Therefore, in accordance with section 40 of the *Patent Act*, 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.

Konstantinos Georgaras

Commissioner of Patents

Dated at Gatineau, Quebec

this 5th day of June, 2024.