

Citation: Ontario Lottery and Gaming Corporation (Re), 2021 CACP 32

Commissioner's Decision #1585

Décision du commissaire n° 1585

Date: 2021-06-09

TOPIC: J-00 Meaning of Art

J-50 Mere Plan

SUJET: J-00 Signification de la technique

J-50 Simple Plan

Application No. : 2,811,733

Demande n° 2 811 733

IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application number 2,811,733, having been rejected under subsection 30(3) of the *Patent Rules* (SOR/96-423) as they read immediately before October 30, 2019, has consequently 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 Canadian patent application number 2,811,733 which is entitled “SYSTEM AND METHOD FOR RETAILER RISK PROFILING” and is owned by ONTARIO LOTTERY AND GAMING CORPORATION (“the Applicant”).
- [2] A review of the rejected application has been conducted by the Patent Appeal Board (“the Board”) pursuant to paragraph 199(3)(c) of the *Patent Rules* (SOR/2019-251). As explained in more detail below, my recommendation to the Commissioner of Patents is to refuse the application.

BACKGROUND

The application

- [3] Canadian patent application 2,811,733 was filed on April 2, 2013, and was laid open to public inspection on October 2, 2014.
- [4] The application relates to managing and using information in a lottery system. More specifically, it relates to a method of identifying risky transactions and determining risk profiles of lottery retailers using the identified transactions.

Prosecution history

- [5] On May 11, 2018, a Final Action (“FA”) was issued pursuant to subsection 30(4) of the *Patent Rules* (SOR/96-423) as they read immediately before October 30, 2019, in which the application was rejected on the basis of non-statutory subject-matter. The FA stated that claims 1 to 5 on file (“claims on file”), dated July 17, 2017, did not comply with section 2 of the *Patent Act*.
- [6] On August 23, 2018, a response to the FA (“R-FA”) was filed by the Applicant. In the R-FA, the Applicant submitted a proposed set of claims 1 to 5 (“proposed claims”) for consideration, and argued that the claimed invention was directed to patentable subject-matter and complied with section 2 of the *Patent Act*.
- [7] Since the Examiner maintained the position that the application did not comply with section 2 of the *Patent Act*, the application was forwarded to the Board on October 23, 2018, along with a Summary of Reasons (“SOR”) explaining why the claims on file and

the proposed claims did not define patentable subject-matter.

- [8] The SOR was forwarded to the Applicant on October 30, 2018.
- [9] The undersigned has been assigned to review the rejected application on behalf of the Commissioner of Patents under paragraph 199(3)(c) of the *Patent Rules* (SOR/2019-251).
- [10] In a preliminary review letter dated July 9, 2020 (“PR letter”), I presented my preliminary analysis and rationale as to why the claims on file did not comply with section 2 of the *Patent Act*, and why the proposed claims cannot be considered a “necessary” amendment under subsection 86(11) of the *Patent Rules* (SOR/2019-251), based on the jurisprudence and Office Practice at the time. The PR letter also offered the Applicant the opportunities to make written submissions and to attend an oral hearing.
- [11] In an electronic mail dated August 31, 2020, the Applicant indicated that they would not attend a hearing or provide further written submissions.
- [12] Following the decision of the Federal Court of Canada in *Choueifaty v Canada (Attorney General)* 2020 FC 837 [*Choueifaty*], the Patent Office issued “Patentable subject-matter under the *Patent Act*,” (CIPO, November 2020) [*PN2020–04*]. In view of the latest guidance from *Choueifaty* and *PN2020–04*, the subject-matter issue of the present application has been reconsidered.
- [13] In a supplemental preliminary review letter (“supplemental PR letter”) dated March 3, 2021, I presented my analysis and rationale, according to the latest jurisprudence and Office Practice, as to why the subject-matter of the claims on file and the proposed claims was prohibited under subsection 27(8) of the *Patent Act* and did not comply with section 2 of the *Patent Act*. The Applicant was also offered the opportunities to make further submissions and to attend another oral hearing (“the second oral hearing”) scheduled on April 16, 2021.
- [14] In a letter dated March 19, 2021, the Applicant indicated that they would attend the second oral hearing and would submit further written submission by April 5, 2021.
- [15] I attempted to contact the Applicant regarding the second oral hearing via voice messages and electronic mail on April 6, 2021, April 14, 2021, and April 15, 2021. No response was received.

[16] On April 16, the oral hearing was held via teleconference. The Applicant did not attend the hearing.

[17] No further written submission has been received.

ISSUES

[18] There is only one issue to be considered in this review: whether the claims on file define patentable subject-matter, as required by the *Patent Act*. The proposed claims are also considered.

LEGAL PRINCIPLES AND PATENT OFFICE PRACTICE

Purposive construction

[19] In accordance with *Free World Trust v Électro Santé Inc*, 2000 SCC 66 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 or not an element is essential depends both on the intent expressed in or inferred from the claim, and on whether it would have been obvious to the skilled person that a variant has a material effect upon the way the invention works.

[20] *PN2020-04* also discusses the application of these principles, pointing out that all elements set out in a claim are presumed essential unless it is established otherwise or such presumption is contrary to the claim language.

Patentable subject-matter

[21] The definition of invention is set out in section 2 of the *Patent Act*:

invention means any new and useful art, process, machine, manufacture or composition of matter, or any new and useful improvement in any art, process, machine, manufacture or composition of matter.

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

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

[23] *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.

[24] *PN2020-04* further describes the Patent Office's approach to determining if a computer-related invention is patentable subject-matter. For example, 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 and unpatentable subject-matter. A computer programmed to merely processes the algorithm in a well-known manner without solving any problem in the functioning of the computer will not make it patentable subject-matter because the computer and the algorithm do not form part of a single actual invention that solves a problem related to the manual or productive arts. On the other hand, if processing the algorithm improves the functionality of the computer, then the computer and the algorithm would together form a single actual invention that solves a problem related to the manual or productive arts and the subject-matter defined by the claim would be patentable.

ANALYSIS

[25] Since the Applicant has not provided further written submissions after the supplemental PR letter and did not attend the second oral hearing, my review is completed based on the written record, as explained in the supplemental PR letter (page 2). Therefore, the preliminary views presented in the supplemental PR letter are considered to not be disputed, and my recommendation below provides an overview of my analysis and rationale presented in the supplemental PR letter.

Purposive construction

[26] There are 5 claims on file, including independent claim 1 and dependent claims 2 to 5. For this analysis, claim 1 is considered to be representative:

1. A lottery system comprising:

a plurality of retail terminals, each of the retail terminals coupled to a communication network and configured for purchasing and validating tickets;

at least one administration access device;

an information management system coupled to the network and each of the plurality of retail terminals, and each of the at least one administration access device, the information management system comprising:

at least one processing unit for executing instructions; and

at least one memory unit for storing instructions, the instructions when executed by the at least one processing unit configuring the system to provide:

a transactions database storing information pertaining to interactions with the lottery system received from the plurality of retail terminals, each of the plurality of interactions stored as a respective transaction associated with a unique transaction ID and a transaction type;

a flagged transactions database storing flagged transactions;

transaction flagging functionality for:

accessing transaction information of at least one transaction stored in the transactions database;

retrieving one or more flagging criteria, each specifying an assessment type, a transaction type and transaction criteria, the one or more flagging criteria retrieved when the transaction type of the respective flagging criteria matches the transaction type of the at least one transaction of the transaction information;

determining that the transaction criteria of at least one of the retrieved flagging criteria matches characteristics of the at least one transaction of the transaction information; and

generating a flagged transaction assessment with an assessment type of the flagging criteria associated with the transaction criteria matching the characteristics of the at least one transaction, a flagged transaction ID and a retailer ID of a retailer associated with the transaction information; and

storing the generated flagged transaction assessment in the flagged transactions database; and

risk profile functionality for:

accessing risk assessment information associated with a retailer identifier (ID) of a lottery retailer, the risk assessment information providing an indication of one or more risk infractions assessed against the lottery retailer, each of the one or more assessed risk infractions comprising a flagged transaction assessment stored in the flagged transactions database and associated with a respective unique assessment type identifier (ID) of a plurality of predetermined assessment type IDs;

accessing a retailer risk model defining a respective weighting value to apply to each one of the plurality of predetermined assessment type IDs;

determining a risk profile for the lottery retailer from the one or more assessed risk infractions and the weightings determined from the accessed retailer risk model;

receiving a selection of one of the assessment type IDs; and

displaying on at least one of the administration access devices details of the assessed risk infractions associated with the received query retailer ID having the selected assessment type ID.

[27] Dependent claims 2 to 5 set forth the following additional features:

- determining a number of occurrences of each type of risk infraction in the risk assessment information; determining values for each type of risk infraction in the risk assessment information, each respective value determined based on the number of occurrences of the respective type of risk infraction and the weighting of the type of risk infraction in the risk profile; and determining an overall risk number as a summation of the individual values for each type of risk infraction in the risk assessment information (claim 2);
- the risk profile defines a respective first weighting value, a second weighting value, and a threshold value for each one of the plurality of predetermined risk type IDs, wherein determining the respective values for each type of risk infraction in the risk assessment information comprises:
 - determining the value as a product of the first weighting value and the number of occurrences of the respective type of risk infraction when the number of occurrences is less than or equal to the threshold associated with the respective type of risk infraction in the retailer risk profile; and
 - determining the value as a sum of a first product of the first weighting value and the threshold associated with the respective type of risk infraction in the retailer risk profile and a second product of the second weighting value and a difference between the number of occurrences and the threshold when the number of occurrences of the type of the risk infraction is greater than the threshold associated with the respective type of risk infraction in the retailer risk profile (claim 3);
- determining an overall risk number for each of a plurality of retailers, each of the respective overall risk numbers determined as a summation of individual values of the respective retailer profile; and determining a ranking of each of the retailers based on the determined overall risk number of each of the retailers (claim 4); and
- receiving updated risk assessment information; and updating the risk profile based on the updated risk assessment information (claim 5).

The person skilled in the art

[28] As indicated in the supplemental PR letter, for this review, the person skilled in the art was identified as stated in the FA (page 2):

The skilled person is a group of persons skilled in the field of computer software development with an emphasis on managing and using information in lottery systems.

[29] I maintain this characterization for this review.

Common general knowledge

[30] The supplemental PR letter provided the following identification of the CGK of the skilled person:

The FA (page 2) identified the CGK of the skilled person as:

This person's common general knowledge at the publication date of the patent application would have included the programming of general purpose computers and the concepts and the state of the general technology regarding determining risk profiles of lottery retailers by periodically auditing the lottery retailers in order to determine their compliance with the rules and regulations (see Description, "Background" section).

The Applicant has not disputed this identification and it is preliminarily adopted in this review.

Elaborating on the statement in the FA, based on the information from the "Background" section of the application, I consider the following knowledge as relevant CGK of the skilled person:

- Knowledge of rules and regulations of lottery organizations;
- Knowledge of different types of lottery games, including gaming rules and how they are implemented in a lottery system;
- Knowledge regarding design, implementation, operation, and maintenance of a computerized lottery system using conventional computer technologies and conventional communications networks, the lottery system comprising a lottery administration entity device and a plurality of computer devices in different retailer locations;
- Knowledge of known potentially fraudulent behaviours of lottery retailers; and
- Knowledge of operation of lottery retailer investigations.

[31] I maintain this characterization for this review.

Essential elements

[32] As indicated in the supplemental PR letter, according to *PN2020-04*, purposive construction is conducted by considering where the skilled person would have understood the Applicant to have intended to place the fences around the monopoly being claimed.

[33] Considering the whole of the specification, the skilled person would understand that there is no use of language in the claims indicating that any of the elements are optional, a preferred embodiment, one of a list of alternatives, or non-essential. Therefore, all elements recited in each of the claims are presumed to be essential.

Patentable subject-matter

[34] Although the claimed computer elements are presumed to be essential, as noted in *PN2020-04*, the mere fact that a computer is identified to be an essential element of a claimed invention for the purpose of determining the fences of the monopoly under purposive construction does not necessarily mean that the subject-matter defined by the claim is patentable subject-matter and outside of the prohibition under subsection 27(8) of the *Patent Act*.

[35] As explained in the supplemental PR letter, I consider that the claims on file are directed to non-patentable subject-matter:

[A]s stated in *PN2020-04*, “[t]o 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,” referencing, in part, *Canada (Attorney General) v Amazon.com, Inc*, 2011 FCA 328 [*Amazon*] paras 42 and 66 to 69. In *Amazon* (paras 61 to 63, 66, and 69) the court stated that a disembodied idea cannot be rendered patentable merely because it has a practical embodiment or a practical application. *Amazon* also noted that this was the situation in *Schlumberger Canada Ltd v Commissioner of Patents*, [1982] 1 FC 845 (FCA) at 205 to 206 [*Schlumberger*], where the computer was merely being used to make the kind of calculations it was invented to make.

For the present application, the claimed generic computer elements, such as “processing unit,” “memory unit,” “database,” and display elements, are merely used in a well-known manner to input, process, and output data. Therefore, the mere presence of these elements would not render an abstract algorithm patentable, according to *PN2020-04*. The skilled person, when reading the specification as a whole and considering lack of implementation details from the specification, would understand how these elements might be implemented and used conventionally by the claimed method, without any improvement on the computer itself. Therefore, in my preliminary view, the computer elements as claimed do not form part of the actual invention. Rather, the computer elements operate in a well-known manner to process the algorithm and calculations for determining risk profiles of lottery retailers. Hence it is my preliminary view that the computer elements as claimed are merely being used to make the kind of generic calculations they are known to make (see *Schlumberger*).

Additionally, the claims on file recite “retail terminals” and “a communications network.” In my preliminary view, these are conventional and well-known devices used to obtain input data of the claimed abstract algorithm. The present application is not directed to how lottery retailer data is obtained, or new or improved means of lottery retailer data retrieval. The skilled person, when reading the specification as a whole, would understand that the actual invention of the present application is directed to the abstract algorithm of determining risk profiles of lottery retailers. Whether the input data of the algorithm comes from a generic retail terminal over a network, or is manually introduced to the algorithm, does not have a material effect on the working of the invention. Moreover, there is no evidence that the

generic data retrieval steps improve the functioning of the computerized lottery system. As the disclosure is focused on the algorithm and its benefits, it is my preliminary view that the retail terminals and the communications network would not impart physicality to the claimed method, and are not part of the actual invention.

Consequently, it is my preliminary view that the actual invention is directed to an abstract algorithm of identifying risky transactions and determining risk profiles of lottery retailers based on the identifications. This subject-matter is directed to an abstract algorithm, is prohibited under subsection 27(8) of the *Patent Act*, and is not considered to be patentable subject-matter under section 2 of the *Patent Act*.

Dependent claims 2 to 5 recite further data processing rules concerning how the risk profiles are generated. It is my preliminary view that these claims are also directed to abstract rules and do not comply with subsection 27(8) and section 2 of the *Patent Act* for the same reasons above.

Therefore, it is my preliminary view that claims 1 to 5 on file do not define patentable subject-matter and do not comply with subsection 27(8) and section 2 of the *Patent Act*.

[36] I maintain this analysis for this review.

Proposed claims

[37] The supplemental PR letter considered that the proposed claims did not overcome the non-patentable subject-matter defect of the claims on file, and cannot be considered a “necessary” amendment under subsection 86(11) of the *Patent Rules*:

In the proposed claims, the following features were added to independent claim 1 (underlined):

- Displaying on at least one of the administration access devices the determined risk profile;
- Receiving a selection of one of the assessment type IDs used in determining the displayed risk profile.

The newly introduced features concern data presentation. Since there is no use of language indicating that any one of these features is optional, a preferred embodiment, one of a list of alternatives, or non-essential, in my preliminary view, these features are preliminarily considered to be essential to the proposed claims.

However, since the present application focuses on the abstract algorithm of risk profile determination and does not disclose any new or improved techniques for displaying the result of the claimed algorithm, the display elements are considered to be part of the generic output interface of the generic computer as claimed. In my preliminary view, the display elements, by themselves or in combination with other claimed elements, do not improve the functioning of the computerized lottery system. In my preliminary view, how the result of the claimed algorithm is presented does not have material effect on the working of the invention. Therefore, it is my preliminary view that these elements would not impart

physicality to the claimed method, and are not considered to be part of the identified actual invention.

Therefore, it is my preliminary view that the proposed claims would not change the identification of the skilled person, CGK, and the actual invention. In my preliminary view, the proposed claims cannot be considered to be “necessary” amendments under subsection 86(11) of the *Patent Rules* because they do not comply with either subsection 27(8) or section 2 of the *Patent Act* for the reasons stated above.

[38] I maintain this analysis for this review.

Conclusion

[39] I am of the view that claims 1 to 5 on file are directed to non-patentable subject-matter, which is prohibited under subsection 27(8) of the *Patent Act* and falls outside the definition of “invention” in section 2 of the *Patent Act*.

[40] I am also of the view that the proposed claims 1 to 5 cannot be considered a “necessary” amendment under subsection 86(11) of the *Patent Rules* because they do not comply with either subsection 27(8) or section 2 of the *Patent Act*.

RECOMMENDATION OF THE BOARD

- [41] In view of the above, I recommend that the application be refused on the ground that all claims on file are directed to non-patentable subject-matter, which is prohibited under subsection 27(8) of the *Patent Act* and falls outside the definition of “invention” in section 2 of the *Patent Act*.
- [42] Further, the proposed claims 1 to 5 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*.

Liang Ji

Member

DECISION OF THE COMMISSIONER

[43] I concur with the findings of the Board and its recommendation that the application should be refused because claims 1 to 5 on file are directed to non-patentable subject-matter, which is prohibited under subsection 27(8) of the *Patent Act* and falls outside the definition of “invention” in section 2 of the *Patent Act*.

[44] 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.

Virginie Ethier

Assistant Commissioner of Patents

Dated at Gatineau, Quebec,

This 9th day of June 2021