

Citation: Financial & Risk Organisation Limited (Re), 2020 CACP 23
Commissioner's Decision #1543
Décision du Commissaire #1543
Date: 2020-05-28

TOPIC: J00 Meaning of Art
 J10 Computer Programs
SUJET: J00 Signification de la technique
 J10 Programmes d'ordinateur

Application No. : 2,688,230

Demande n° 2 688 230

IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application number 2,688,230 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*”), has consequently been reviewed in accordance with paragraph 199(3)(c) of the *Patent Rules* (SOR/2019-251). The recommendation of the undersigned and the decision of the Commissioner are to refuse the application.

Agent for the Applicant:

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INTRODUCTION

- [1] This recommendation concerns the review of rejected Canadian patent application number 2,688,230 (“the instant application”), which is entitled “SYSTEM FOR ROUTING AN INDICATION OF INTEREST MESSAGE BASED ON A HISTORY OF TRADING ACTIVITY OF TRADING COUNTERPARTIES” and is owned by Financial & Risk Organisation Limited (“the Applicant”). 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*. As explained in more detail below, the Board’s recommendation is that the Commissioner of Patents refuse the application.

BACKGROUND

The Application

- [2] The instant application was filed under the provisions of the Patent Cooperation Treaty and has an effective filing date in Canada of June 6, 2008. It was laid open to public inspection on December 18, 2008.
- [3] The instant application relates to identifying high-probability trading party matches in a trading system. The application has 10 claims on file, which were received at the Patent Office on April 28, 2016.

Prosecution History

- [4] On October 10, 2017, a Final Action (“FA”) was written pursuant to subsection 30(4) of the *former Patent Rules*. The FA stated that the instant application was defective because all of the claims on file were directed to subject matter outside of the definition of invention and therefore were not compliant with section 2 of the *Patent Act*.
- [5] In an April 6, 2018 response to the FA (“R-FA”), the Applicant submitted arguments in favour of the patentability of the claims on file.
- [6] As the Examiner still considered the application not to comply with the *Patent Act*, pursuant to paragraph 30(6)(c) of the *former Patent Rules*, the application was forwarded to the Board for review on May 9, 2018 along with an explanation outlined in a Summary of Reasons (“SOR”). The SOR set out the position that the specification on file was still considered to be defective.

- [7] In a letter dated May 16, 2018, the Board forwarded to the Applicant a copy of the SOR and requested that the Applicant confirm its continued interest in having the application reviewed.
- [8] In a letter dated July 19, 2018, the Applicant confirmed its interest in having the review proceed.
- [9] I reviewed the instant application under paragraph 199(3)(c) of the *Patent Rules*.
- [10] In a preliminary review letter (“PR letter”) dated April 1, 2020, I set out my preliminary analysis of the issue with respect to the claims on file. I also provided the Applicant with an opportunity to make oral and/or written submissions.
- [11] In an email received on April 7, 2020 the Applicant declined the opportunity for a hearing and indicated that they did not wish to provide further written submissions.

ISSUE

- [12] The sole issue to be addressed by the present review is whether or not the claims on file are directed to subject matter which meets the definition of invention at section 2 of the *Patent Act*.

LEGAL PRINCIPLES AND OFFICE PRACTICE

Purposive Construction

- [13] In accordance with *Free World Trust v Électro Santé Inc*, 2000 SCC 66, essential elements are identified through a purposive construction of the claims done by considering the whole of the disclosure, including the specification and drawings (see also *Whirlpool Corp v Camco Inc*, 2000 SCC 67 at paras 49(f) and (g) and 52). In accordance with the *Manual of Patent Office Practice* (CIPO) at §12.02, revised June 2015 [MOPOP], the first step of purposive claim construction is to identify the person of ordinary skill in the art (the POSITA) and their relevant common general knowledge (CGK). The next step is to identify the problem addressed by the inventors and the solution put forth in the application. Essential elements can then be identified as those required to achieve the disclosed solution as claimed.

Statutory Subject Matter

[14] 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.

[15] “*Examination Practice Respecting Computer-Implemented Inventions*,” PN 2013–03 (CIPO, March 2013) [PN 2013–03] clarifies the Patent Office’s approach to determining if a computer-related invention is statutory subject matter.

[16] As indicated in *PN 2013–03*, where a computer is found to be an essential element of a construed claim, the claimed subject matter will generally be statutory. Where, on the other hand, it is determined that the essential elements of a construed claim are limited to matter excluded from the definition of invention (e.g., the fine arts, mere ideas, schemes or rules), the claimed subject matter will not comply with section 2 of the *Patent Act*.

ANALYSIS

The POSITA and the relevant CGK

[17] The FA defined the POSITA as follows:

...the notional person of skill in the art, or team of persons skilled in the art, would include traders of financial instruments in cooperation with Information Technology personnel skilled in computerized systems for trading financial instruments.

[18] The Applicant did not dispute this definition, and I adopt it here.

The FA also characterized the CGK as follows:

The team of persons skilled in the art have skills and experience in:

- trading of financial instruments and the communication of trading interests to other entities (see present application, page 2, lines 3-6); and
- computer components, devices, networks, and computer applications, including their design, implementation, operation and maintenance, including, but not limited to:
 - messaging systems, such as Tradeweb Routing Network or Tradeweb's AutEx Network, including messaging formats such as SWIFT and FIX (present application, page 2, lines 5-6; page 8, line 22 to page 9, line 4);
 - broadly cast and narrowly cast Indications of Interest (IOI) in prior art systems (present application, figures 3 and 4);

- electronic trading systems, platforms, exchanges, and associated trading devices;
- computerized trading applications and trading tools;
- general purpose computers, special purpose computers, computing devices, processors, input and output devices, network interfaces, and user interfaces;
- computer software and associated programming languages, memory devices and storage mediums;
- distributed computing systems, including internetwork protocols and information/data transfers between devices and modules; and
- computer databases and associated database management protocols.

[19] The Applicant did not dispute this characterization, and I adopt it here.

Problem and Solution

[20] The FA characterized the problem as follows:

Accordingly, the problem faced by the application is considered to be that in the prior art, there is a lack of relevant information as to the trading posture of potential counterparties and therefore IOI senders must choose between sending their IOI to a narrow set of entities and missing possible trading opportunities, or sending their IOI to a broad set of entities and risking information leakage (present application, page 5, lines 4-11).

[21] In the R-FA, the Applicant argued that the FA had not properly characterized the problem. Quoting from the description at pages 2-4 and noting Figures 3 and 4, the Applicant argued that there was a technical problem with existing messaging systems for transmitting IOI messages.

[22] I do not find in these passages and figures a description pertaining to a problem of the commonly used messaging systems, only a statement of the potential problems resulting from addressing an IOI message to too broad or too narrow a list of addressees. I adopt the characterization of the problem consistent with the FA; i.e. that the problem pertains to the selection of addresses of an IOI message, not to the routing of such a message.

[23] The FA characterized the solution as follows:

The solution proposed by the applicant appears to analyse an aggregated weighted history of the trading activity of trading counterparties to determine which counterparties are likely to have a trading posture that is contra to a buy or sell indication indicated in an IOI message (present application, claim 1).

[24] The Applicant did not dispute this characterization, and I adopt it here.

Essential Elements

[25] Independent claim 1 reads:

A system for routing an indication of interest message for a financial instrument, comprising:

- (i) a first computer element communicatively associated with one or more
- (ii) trade messaging systems, the first computer element programmed and configured to receive trade activity information from the one or more trade messaging systems relating to a history of trading activity of a plurality of trading counterparties;
- (iii) a database for storing the information relating to the history of trading a second computer element communicatively associated with the database and with at least one user computer, the second computer element programmed and configured to

update the database based on an analysis of aggregated weighted historical data associated with at least one of the plurality of trading counterparties and the financial instrument to determine which counterparties of the plurality of trading counterparties are likely to have a trading posture that is contra to a buy or sell indication indicated in the indication of interest message, and

receive an indication of interest message from the at least one user computer and route communication of the indication of interest message to at least one of the plurality of trading counterparties where the analysis indicates that said at least one trading counterparty is contra to the received buy or sell indication.

[26] Considering independent claim 1, the essential elements to effect the solution are:

- receiving trade activity information relating to a history of trading activity of a plurality of trading counterparties;
- providing a database for storing the information relating to the history of trading; and
- updating the database based on an analysis of aggregated weighted historical data associated with at least one of the plurality of trading counterparties and a financial instrument to determine which counterparties of the plurality of trading counterparties are likely to have a trading posture that is contra to a buy or sell indication indicated in an indication of interest message.

[27] In brief, the essential elements for solving the problem of how to better determine the appropriate counterparties to which an IOI should be routed involve gathering certain historical information, storing and analyzing the information, and using the analysis to determine the appropriate parties to which an IOI should be routed. The data communications elements related to actually sending the IOI are not part of the problem or

its solution. The computerized elements related to the database and processing the information stored within it are also not part of the problem or solution.

- [28] In the R-FA, the Applicant argued that the FA had employed an improper “contribution approach” to the analysis of essential elements to conclude that the computerized and data communications elements were non-essential because they are not new. The test of whether an element is essential is indeed not whether the element is new, but whether the element is essential to the solution to the problem. Here, the data communications and computerized elements are the normal environment for the alleged invention, but are not essential to effect the solution of gathering, storing, evaluating and using certain information.
- [29] In the R-FA, the Applicant went on to state that the problem explicitly related to routing of a message in an electronic system and therefore, that the solution necessarily involved electronic routing of the IOI message once appropriate recipients had been identified. In my view, the POSITA would not consider the problem and solution to relate specifically to electronic systems, and would not consider the actual routing of the message to be part of the problem or solution either.
- [30] Dependent claims 2-10 recite further details of the nature or source of the historical trading information or the algorithm for evaluating the data. The additional essential elements of these claims are data or algorithmic.

Subject matter

- [31] As purposively construed above, the essential elements of claims 1-10 constitute information and certain manipulations of that information and comparison with other information to determine appropriate recipients of a message.
- [32] The essential elements of the claims comprise solely subject matter which lies outside the categories of invention at section 2 of the *Patent Act*.
- [33] Therefore, claims 1-10 are not directed to statutory subject matter and thus do not comply with section 2 of the *Patent Act*.

CONCLUSION AND RECOMMENDATION OF THE BOARD

- [34] For the reasons set out above, I recommend that the Commissioner of Patents refuse this application as the claims on file are directed to non-statutory subject matter and are therefore non-compliant with section 2 of the *Patent Act*.

Howard Sandler

Member

DECISION OF THE COMMISSIONER

[35] I concur with the conclusions and recommendation of the Board that the application be refused on the ground that the claims on file are directed to non-statutory subject matter and are therefore non-compliant with section 2 of the *Patent Act*.

[36] Therefore, in accordance with section 40 of the *Patent Act*, I refuse to grant a patent on this application. Under section 41 of the *Patent Act*, the Applicant has six months within which to appeal my decision to the Federal Court of Canada.

Johanne Bélisle
Commissioner of Patents

Dated at Gatineau, Quebec

this 28th day of May 2020