

Commissioner's Decision #1443
Décision du commissaire #1443

TOPICS: J-00 Meaning of Art
J-50 Mere Plan

SUJETS: J-00 Signification de la technique
J-50 Simple plan

Application No.: 2,489,800
Demande n°.: 2 489 800

IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application number 2,489,800, having been rejected under subsection 30(3) of the *Patent Rules*, has subsequently been reviewed in accordance with paragraph 30(6)(c) of the *Patent Rules*. The recommendation of the Patent Appeal Board 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 patent application number 2,489,800, which is entitled “Systems and Methods for Providing Business Intelligence Based on Shipping Information” and is owned by United Parcel Service of America, Inc. The outstanding defect to be addressed by this recommendation is whether the claims define statutory subject-matter as required by section 2 of the *Patent Act*. The Patent Appeal Board (“the Board”) has reviewed the rejected application pursuant to paragraph 30(6)(c) of the *Patent Rules*. As explained below, our recommendation is to refuse the application.

BACKGROUND

The application

- [2] Canadian patent application 2,489,800, based on a previously filed Patent Cooperation Treaty application, was filed June 6, 2003 and published December 31, 2003.
- [3] The application pertains to specific business services provided by business intelligence (“BI”) systems that analyze shipping information. One particular business service enables a customer (shipping entity) to forecast the delivery time of an item from two different suppliers and thus provide a determination of which supplier to use.

Prosecution history

- [4] On February 27, 2015, a Final Action (“FA”) was written pursuant to subsection 30(4) of the *Patent Rules*. The FA stated that the application is defective because claims 1-3 on file do not comply with section 2 of the *Patent Act*.
- [5] In a May 27, 2015 response to the FA (“R-FA”), the Applicant proposed an amended set of claims 1-3 (“first set of proposed claims”) and submitted arguments for allowance of the application. In particular, the Applicant contended that the claims include physical, computerized elements and therefore are directed to statutory subject-matter.
- [6] As the Examiner considered the application not to comply with the *Patent Act*, the application was forwarded to the Board for review, pursuant to subsection 30(6) of

the *Patent Rules*, along with a Summary of Reasons (“SOR”) maintaining the rejection of the application based on the defect indicated by the FA.

- [7] With a letter dated October 6, 2015, the Board forwarded the Applicant a copy of the SOR and offered the Applicant the opportunities to attend an oral hearing and to make further written submissions. With its response letter of January 5, 2016, the Applicant declined the offer of an oral hearing, instead requesting the review to proceed based on the current written record. The Applicant indicated that further submissions would be forthcoming.
- [8] To facilitate the Commissioner’s review of the rejected application under paragraph 30(6)(c) of the *Patent Rules*, a Panel was formed to review the application and make a recommendation as to its disposition. In a letter dated June 22, 2017 (“Panel Letter”), we set out our preliminary analysis and rationale as to why, based on the record before us, the subject-matter of the claims on file does not comply with section 2 of the *Patent Act*.
- [9] On July 20, 2017, the Applicant responded to the Panel Letter (“Response Letter”), providing additional submissions including a new set of proposed claims (“second set of proposed claims”).

ISSUE

- [10] The issue to be resolved by this review is whether the claims on file define subject-matter falling within the definition of invention in section 2 of the *Patent Act*.

LEGAL PRINCIPLES AND PATENT OFFICE PRACTICE

Purposive construction

- [11] In accordance with *Free World Trust v. Électro Santé*, 2000 SCC 66 [*Free World Trust*], 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 v. Camco*, 2000 SCC 67 [*Whirlpool*] at paragraphs 49(f) and (g) and 52). In accordance with the *Manual of Patent Office Practice*, revised June 2015 (CIPO) at § 13.05 [*MOPOP*], the first step of purposive claim construction is to identify the skilled person and his or her 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.

- [12] In its Response Letter, the Applicant contended that purposive construction carried out in accordance with Office practice does not accord with Canadian law. In particular, the Applicant argued that the Office approach places too much emphasis on the analysis of a described problem and solution and that in accordance with Canadian jurisprudence, all claimed features or elements in a claim are presumed to be essential (citing *Pollard Banknote Ltd. v. BABN Technologies*, 2016 FC 883 [*Pollard Banknote*], *AstraZeneca Canada v. Apotex*, 2017 SCC 36 [*AstraZeneca*], and *Canada (A.G.) v. Amazon.com*, 2011 FCA 328 [*Amazon.com*]).
- [13] In our view, having considered the Applicant’s arguments, the jurisprudence cited by the Applicant continues to follow and draw on the principles of purposive construction as established in previous jurisprudence such as *Free World Trust* and *Whirlpool*. The cited jurisprudence establishes, among other principles, that the claim language is to be construed based on a reading of the patent as a whole from the point of view of the skilled person, that purposive construction cannot be determined solely on the basis of a literal reading of the patent claims, and that because claim language may be deliberately or inadvertently deceptive, a practical feature of a claim may not form part of the set of essential elements of a claimed invention.
- [14] The guidance of *MOPOP* at § 13.05.02b outlines the Office’s interpretation of Canadian patent law in respect of purposive construction as applied to the examination of a patent application. The Office practice specifies that a properly informed purposive construction must consider the specification as a whole, as read through the eyes of the person skilled in the art, against the background of the CGK in the field or fields relevant to the invention, so as to identify the problem and solution addressed by the application. The identification of the problem is guided by the examiner's understanding of the common general knowledge in the art and by the teachings of the description. The solution to that problem informs the identification of the essential elements: not every element that has a material effect on the operation of a given embodiment is necessarily essential to the solution.

Statutory subject-matter

- [15] 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.

[16] Following the Federal Court of Appeal decision in *Amazon.com*, the Office released Practice Notice PN2013-03 “Examination Practice Respecting Computer-Implemented Inventions”, (CIPO, March 2013) [PN2013-03] that clarified examination practice with respect to the Office’s approach to computer-implemented inventions.

[17] As stated in *PN2013-03*, 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 (for example, fine arts, methods of medical treatment, features lacking in physicality or claims where the subject-matter is a mere idea, scheme, rule or set of rules), the claim will not be compliant with section 2 of the *Patent Act*.

ANALYSIS

Purposive construction

The person skilled in the art

[18] In the Panel Letter, we identified the skilled person as a team comprising one or more BI professionals with experience in fields related to shipping, plus programmers or other technologists experienced with developing tools (such as BI systems) for such professionals. The Applicant’s Response Letter did not disagree with this assessment and accordingly we use it in this review.

The CGK

[19] In the Panel Letter, we identified the following concepts as CGK:

- a) the conventional business practices, concerns and relationships of carriers and shippers, typical forecasting methods, and general decision-making strategies and techniques; and
- b) the conventional technology used to support the above business practices and methods, such as: the infrastructure used by carriers to collect shipping information and provide access to it; BI systems, tools and methods; the centralization of the collection and provision of shipping information by a carrier for storage and analysis; and communications means and techniques, etc.

[20] In its Response Letter, the Applicant made the observation that according to Canadian jurisprudence, CGK is knowledge that a skilled person would reasonably be expected to know and that CGK must be established and cannot be assumed. However, the Applicant did not indicate any disagreement with the identified CGK as set out in the Panel Letter, and thus we adopt the above identification of the skilled person and the CGK in this recommendation.

The problem and solution

[21] The Panel Letter identified the problem as the need to provide shipping entities with specific shipping data analysis services based on current and historical shipping data. The Panel Letter identified the solution to this problem as providing one particular shipping data analysis service, specifically, the data analysis of historical and current shipping data to facilitate the determination by a shipping entity of which supplier to choose based on a forecast of the delivery time of an item by a particular carrier.

[22] The Response Letter disagreed with the problem and solution identified.

[23] First, the Applicant contended that the Office undertook an incorrect approach to claim construction, one that focusses on a problem and solution gleaned from the description. The Panel has addressed the Office approach to claim construction in view of Canadian jurisprudence at paragraphs [11] – [14] above.

[24] Second, the Applicant contended that the application provides a technical solution to a technical problem, for example:

- a) by minimizing intensive computational resources, addressing a problem in constraining and overloading processing devices;
- b) by using computer processors in complicated delivery forecasting; and
- c) by employing subsets of shipping records, addressing the conventional problems of slow archiving and retrieval of records.

[25] Regarding whether the application provides a technical solution to a technical problem, we stated in the Panel Letter:

the skilled person would understand from the specification that the problem being addressed is not a technical one, but instead pertains to a shipper's need for obtaining shipping data analysis services. The solution provides the shipping entity with shipping data analysis to facilitate the determination of which supplier to choose, based on a forecast of delivery times of a particular item from two suppliers. The solution does not address any problem of improving the functionality of any piece of computer technology.

[26] Addressing each of the Applicant's points in paragraph 25 above, the Panel notes that:

- a) regarding minimizing intensive computational resources, any reduction in the computational load or constraints of a processing device by using only a subset of shipping records for the forecast is a direct result flowing from the BI method and data analysis being provided;
- b) regarding the complicated nature of forecasting delivery times, the use of computers (or mental processes) to perform calculations is well known. The resultant reduction in the time needed to perform such calculations (and the resultant increase in accuracy, repeatability, etc.) by using a computer is also well known; and
- c) regarding slow archiving and retrieval of subsets of data records, by employing subsets of shipping records, the skilled person would understand that processing a subset of files would logically result in a reduced processing load and an improvement in performance, e.g., speed of retrieval.

[27] Our views regarding the skilled person's understanding of the problem and solution are further supported by the fact that the solutions for overcoming technical problems related to slow data retrieval, intensive computational resources, memory constraints, or the complicated sharing of data from multiple, de-centralized locations would already be part of the skilled person's CGK. For example, as part of their knowledge of the conventional technology used to support business practices related to the instant application, possible CGK solutions to these otherwise known computer problems that would have been evident to the person of skill in the art include the use of increased processor speed, faster memory devices and database architecture, multiple distributed servers, or improved network topologies, etc.

[28] Finally, an additional comment raised by the Applicant's Response Letter regarding the problem and solution was that the identification of the solution in the present case amounts to "effectively stating that a person of skill in the art would conclude that the invention as claimed is obvious based on CGK." However, the Panel notes that the assessment of the problem and solution is performed in order to arrive at the identification of the essential elements of the claims. This is separate from any assessment of the obviousness of the claims, which is not at issue in this case.

[29] In light of the above, we adopt the problem and solution identified in the Panel Letter for our analysis in this recommendation.

The essential elements

[30] For convenience, claim 1 is provided below as a representative of the claims:

A computer-implemented method of facilitating a determination, by an entity, of which supplier to use to supply a particular type of item to a particular destination, said method comprising the steps of:

- receiving and storing, in memory of one or more computing devices, a plurality of shipping records associated with a plurality of parcels that have been previously shipped from a particular carrier, each of said plurality of shipping records comprising originating address information, destination address information, parcel identifier information, date of parcel pickup information, and date of parcel delivery information;
- receiving a user identifier from a user;
- using said user identifier to determine a user profile associated with said entity;
- receiving input from said user comprising a first transaction request executable by one or more processors of said one or more computing devices to select a first subset of shipping records from said plurality of shipping records, wherein said first subset of shipping records comprises two or more records associated with said particular type of item provided by a first supplier affiliated with said entity and delivered to said particular destination;
- receiving input from said user comprising a second transaction request executable by said one or more processors of said one or more computing devices to select a second subset of shipping records from said plurality of shipping records, wherein said second subset of shipping records comprises two or more records associated with said particular type of item provided by a second supplier not affiliated with said entity and delivered to said particular destination;
- determining how said first and second transaction requests will be processed by said one or more computing devices, wherein said determination is based on whether said first and second suppliers are affiliated with said entity as indicated in said user profile;
- in response to: (a) receiving said input from said user; and (b) making said determination that said first supplier is affiliated with said entity,
 - executing said one or more processors to retrieve, from said memory, said first subset of shipping records associated with said particular type of item and said first supplier, wherein said originating address information of each shipping record of said first subset of shipping records corresponds to said first supplier's address and said destination address information of each shipping record of said first subset of shipping records corresponds to said destination's address;

- in response to: (a) receiving said input from said user; and (b) making said determination that said second supplier is not affiliated with said entity;
 - executing said one or more processors to retrieve an average delivery time based on said second subset of shipping records associated with said particular type of item and said second supplier from said memory, wherein said originating address information of each shipping record of said second subset of shipping records corresponds to said second supplier's address and said destination address information of each shipping record of said second subset of shipping records corresponds to said destination's address; and
- executing said one or more processors to forecast, based at least in part on said first subset of shipping records and said average delivery time the amount of time that it will take said particular carrier to:
 - deliver said particular type of item from said first supplier to said entity; and
 - deliver said particular type of item from said second supplier to said entity.

[31] As we set out in the Panel Letter, referring to the language of independent claim 1 and considering the solution being addressed by the specification as a whole, the essential elements of claim 1 that solve the problem are:

- An entity seeking to determine which supplier to use to supply an item to a particular destination;
- Receiving shipping records for parcels shipped from a particular carrier;
- Selecting a first subset of shipping records for a particular item provided to the destination by a first supplier affiliated with the entity;
- Selecting a second subset of shipping records for the particular item provided to the destination by a second supplier not affiliated with the entity;
- Retrieving first subset of data for items delivered by first supplier;
- Retrieving an average delivery time based on second subset of data for items delivered by the second supplier; and
- Forecasting, based on the first supplier shipping records and the average delivery time of the second supplier, the amount of time that it will take to deliver the item from the first supplier and the second supplier to the entity.

[32] Dependent claims 2 and 3, as stated in the Panel letter, define additional limitations concerning the manner of determining the delivery time. The essential elements of these claims are, respectively:

- Provide a user the average time in the past for the carrier to deliver the item from the first and second supplier to the entity;
- Provide a user the average time over a specific period of time for the carrier to deliver the item from the first and second supplier to the entity.

- [33] The Applicant, in addressing the essential claim elements in its Response Letter, stated that it was the intention of the inventor that the computer-related components were essential, and furthermore, stated that the skilled person could not carry out the invention without a computer, or related components, i.e., the computer-related components have a material effect on the way the invention operates.
- [34] Regarding the intention of the inventor for the computer-related components to be essential, the Applicant primarily argues that the Office approach to purposive construction is incorrect. This point has already been addressed at paragraphs [11] – [14].
- [35] Regarding the Applicant’s assertion that the invention could not be carried out without the physical computer-related components, in our view this is not the case.
- [36] As discussed in the Panel Letter, and taking into consideration the Applicant’s arguments in the Response Letter regarding essential elements, we consider that the additional computer-related elements and features defined in claim 1 (e.g., “computer-implemented method”, “receiving and storing in memory”, “receiving input” and “executing said one or more processors”) are merely the known features of the carrier’s conventional computer-based BI system. The skilled person would consider the computer-implemented BI systems and its method steps to be the context or operating environment of the invention. The skilled person would recognize that these features are not essential to the solution to facilitate the determination of which supplier to choose based on a forecast of the delivery times of an item from two suppliers.
- [37] As explained in the Panel Letter, the use of these physical elements is outside the scope of the problem and solution. In our view, the application solves the problem of providing shipping entities with specific shipping data analysis services based on current and historical shipping data. In our view, the application does not solve a problem of reducing data retrieval times, providing network communications for decentralized servers or reducing memory constraints. Therefore, while such physical computer-related elements may be part of the context or working

environment of the claimed invention, in our view they are not considered essential elements of the claimed solution itself.

[38] As stated in *MOPOP* at §13.05.02c, not every element that has a material effect on the operation of a given embodiment is necessarily essential to the solution.

Amazon.com also explains, by way of example, that a physical application of an abstract business method, or the use of a programmed computer to implement an algorithm, may not necessarily be part of the essential elements of a claim.

[39] Accordingly, as set out in the Panel Letter, the essential elements of the claims on file pertain to the calculations or rules to facilitate the choosing of a supplier by an entity using a forecast of delivery times from two suppliers. The skilled person would not consider any of the additional computer-related elements and features from the claims to be essential in providing the solution to the problem.

Statutory subject-matter

[40] As set out above, it is the Panel's view that the essential elements of claims 1-3 on file amount to a set of calculations or rules for choosing a supplier by an entity using a forecast of delivery times from two suppliers.

[41] Calculations or rules to forecast delivery times equate to abstract mathematical calculations and do not manifest a discernible effect or change of character or condition in a physical object. Furthermore, the rules and calculations to forecast a delivery time define "a scheme, rule or set of rules" and likewise are not considered to be statutory subject-matter according to the guidance in *PN2013-03*, because such a plan or set of rules do not manifest a discernible effect or change of character or condition in a physical object.

[42] In its Response Letter, the Applicant reiterated that the subject-matter of claims 1-3 "does not relate merely to 'a business venture' or 'theory or plan itself' that can be performed by a 'mental process' as alleged by the Examiner on page 5 of the Office Action [FA]."

[43] In respect of a "business venture", as we explained in the Panel Letter, there is no inherent prohibition on the patentability of business methods or systems. In the present case, the Panel performed a purposive construction of the claims and determined that the essential elements are the calculations or rules to facilitate the choosing of a supplier by an entity using a forecast of delivery times from two suppliers. Our analysis on whether or not the claims define statutory subject-matter

does not depend on whether the claims define a business method or “business venture”.

- [44] In respect of claims 1-3 not merely defining a theory or plan itself that could be performed by mental processes, the essential elements of the claims on file as construed above have been found to be the calculations or rules to forecast a delivery time so as to choose a supplier. The essential elements in the present case define a “plan itself” which can be carried out by mental processes, with no computer processing components determined to be essential. As stated in *PN2013-03*, the Office considers that essential elements which only define a scheme, rule or set of rules are abstract and do not define statutory subject-matter.
- [45] Therefore, in our view, claims 1 to 3 on file do not define statutory subject-matter and do not comply with section 2 of the *Patent Act*.

Proposed claims

- [46] The second set of proposed claims containing claims 1-3 was submitted with the Applicant’s Response Letter. In accordance with subsection 30(6.3) of the *Patent Rules*, if, after review of a rejected application, the Commissioner determines that an application does not comply with the *Patent Act* or the *Patent Rules*, but that specific amendments are necessary, the Commissioner shall notify the Applicant to make these amendments.
- [47] As the second set of proposed claims could be considered for amendment if it is determined that it overcomes the defects noted above and does not introduce any other defects, we provide our views on this claim set, as follows.
- [48] The second set of proposed claims primarily differs from the claims on file by the addition (shown in underline) of the phrase “receiving, via an interface of the one or more computing devices, a user identifier from a user”, and the phrase “executing said one or more processors to retrieve and display via the one or more computing devices, an average delivery time...” to the features of claim 1 on file.
- [49] Regarding the inclusion of the features of an “interface” and a “display”, while these elements are physical statutory features, they are considered to be elements of the operating environment of the computerized business system and not essential to the solution of determining by a shipping entity of which supplier to choose based on a forecast of the delivery time of an item. Accordingly, they would not alter the

outcome of the subject-matter analysis already provided with respect to the claims on file.

[50] The proposed claims also provide for several minor grammatical changes, including the deletion of the words “the steps of”, replacing the word “how” with the phrase “a manner in which”, replacing “will be” with “are”. As such minor grammatical changes would not be considered by the skilled person to change or alter in any way the essential elements of the claims on file, the changes would not alter the outcome of the subject-matter analysis of the claims on file.

[51] Accordingly, our view concerning non-statutory subject-matter also applies to the second set of proposed claims. It follows that the second set of proposed claims is not considered a necessary specific amendment under subsection 30(6.3) of the *Patent Rules*.

RECOMMENDATION OF THE BOARD

[52] In view of the above, the Panel recommends that the application be refused on the basis that claims 1 to 3 on file define non-statutory subject-matter and thus do not comply with section 2 of the *Patent Act*.

[53] We also do not consider the claims proposed on July 20, 2017 to constitute specific amendments necessary to comply with the *Patent Act* and *Patent Rules*. Accordingly, we decline to recommend that the Applicant be notified under subsection 30(6.3) of the *Patent Rules* that said proposed claims are necessary.

Andrew Strong
Member

Stephen MacNeil
Member

Lewis Robart
Member

DECISION

[54] I concur with the findings of the Board and its recommendation to refuse the application because the claims on file do not comply with section 2 of the *Patent Act*.

[55] Accordingly, 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.

Johanne Bélisle
Commissioner of Patents
Dated at Gatineau, Quebec,
this 5th day of March, 2018