

Commissioner's Decision No. 1514
Décision du commissaire n° 1514

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

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

Application No. 2,611,958
Demande n° 2 611 958

IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application number 2,611,958, having been rejected under subsection 30(3) of the *Patent Rules* 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.

Agent for the Applicant:

GOWLING WLG (Canada) LLP
550 Burrard Street, Suite 2300, Bentall 5
VANCOUVER British Columbia
V6C 2B5

INTRODUCTION

- [1] This recommendation concerns the review of rejected patent application number 2,611,958, which is entitled “Method and system for anticipatory shipping” and owned by Amazon Technologies, Inc. (the “Applicant”). The outstanding defect indicated by the Final Action (“FA”) is that the claims do not define statutory subject-matter, contrary to section 2 of the *Patent Act*. The Patent Appeal Board (the “Board”) has reviewed the rejected application pursuant to paragraph 199(3)(c) of the *Patent Rules*. As explained below, our recommendation is to refuse the application.

BACKGROUND

The application

- [2] Canadian patent application 2,611,958 was filed on December 15, 2005, and has been open to public inspection since June 22, 2006.
- [3] The application relates to a computer-implemented method and system for mitigating shipping delays associated with receiving packages from online e-commerce purchases. Previous shipping methods would not assign a delivery address for an item or package until the item had been actually ordered or purchased online, at which time the delivery address would become known and thus could be assigned to a package for shipping.
- [4] The process in the instant application proposes to change the above shipping method by speculatively assigning an address of a destination geographical area (e.g., warehouse or shipping hub location) to the package based on predictive modeling or historical analysis, without completely specifying the delivery address at the time of shipping. At a later time (e.g., once the item is purchased or ordered and the final delivery address is known), the package’s address information is updated by assigning the final delivery address to the package or item.

Prosecution history

- [5] On October 24, 2016, an FA was issued pursuant to subsection 30(4) of the *Patent Rules* as they read immediately before October 30, 2019 (the “former *Rules*”). The FA indicated the subject matter of the claims 1-74 on file did not define statutory subject-matter and therefore did not comply with section 2 of the *Patent Act*.

- [6] In an April 7, 2017 response to the FA (“RFA”), the Applicant submitted arguments in response to the FA as to why the claims define statutory subject-matter.
- [7] The Examiner was not persuaded by the Applicant’s arguments and pursuant to subsection 30(6) of the former *Rules*, the rejected application was forwarded to the Board for review. On August 14, 2017, the Board forwarded a copy of the Examiner’s Summary of Reasons with a letter acknowledging the rejection to the Applicant.
- [8] A Panel was formed to review the rejected application and make a recommendation to the Commissioner as to its disposition. Following our preliminary review, we sent a letter on July 30, 2019 (the “PR letter”) presenting our analysis and rationale as to why, based on the record before us, the subject-matter of the claims on file did not comply with section 2 of the *Patent Act*. The Applicant was also offered an opportunity of a hearing.
- [9] In a letter dated August 20, 2019, the Applicant indicated that a hearing was not required, that the Board’s review should proceed based on the written prosecution record, and that a written response to the PR would be forthcoming.
- [10] The Applicant’s response to the PR letter (“RPR”) was received on August 27, 2019, providing further arguments in favour of allowance of the claims on file.

ISSUE

- [11] The only issue to address in this review is whether the claims on file define statutory subject-matter falling within the definition of invention in section 2 of the *Patent Act*.

LEGAL PRINCIPLES AND PATENT OFFICE PRACTICE

Purposive construction

- [12] In accordance with *Free World Trust v Électro Santé Inc*, 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 Corp v Camco Inc*, 2000 SCC 67 [*Whirlpool*], 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 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 elements of the claimed matter that are fundamental to the disclosed solution.

- [13] In the RPR at pages 13-18, the Applicant disagreed with the approach taken by the Office with regards to claim construction as described in *MOPOP*. The Applicant submitted that these guidelines and their application are valid and lawful only if they correctly apply the principles of claim construction set forth in *Free World Trust* and *Whirlpool*, and as applied in other Canadian jurisprudence. According to the Applicant's submissions, *Free World Trust* and *Whirlpool* show that an element is only non-essential if the skilled reader would have understood from the claim language that the inventor intended it not to be essential and the skilled reader would have appreciated, as of the publication date, that the element could be substituted without affecting the working of the invention.
- [14] However, as discussed in the PR letter, *MOPOP* at §12.02.02e addresses Office practice regarding essential elements. In part, it is noted that not every element having a material effect on the operation of a given practical embodiment is essential to the solution; some recited elements define the context or environment of the embodiment but do not actually change the nature of the solution. Accordingly, purposive construction must consider which elements are required for the solution. The mere presence of an element in the claim language chosen by the inventor cannot override all other considerations during purposive construction of the claims.
- [15] Furthermore, the approach described in *MOPOP* was developed in response to *Canada (Attorney General) v Amazon.com Inc*, 2011 FCA 328 [*Amazon.com*] and reflects the principles of that case, as well as of the earlier *Free World Trust* and *Whirlpool* cases. For example, *Amazon.com* at paras 43, 44, 62, 63 and 73-74 explains that purposive construction “cannot be determined solely on the basis of a literal reading of the patent claims,” that claim language may be “deliberately or inadvertently deceptive,” that a claimed practical application or embodiment may nonetheless not be part of the essential elements of a claimed invention, that purposive construction must be based on “a foundation of knowledge about the relevant art” and that without such a foundation, claim construction may not be well informed.

[16] In its RPR at page 9, the Applicant commented on the “contribution approach” in purposive construction:

Respectfully, however, Canadian law does not permit CIPO to conclude a claim element is non-essential merely because it is known or not inventive. To limit the essential elements to those that form an inventive part of the solution would be equivalent to the so-called “contribution approach,” which CIPO has been explicitly prohibited by the Courts from applying.

[17] The Panel agrees with the statement that Canadian law does not permit a so-called “contribution approach”; if the PR letter led the Applicant to believe that a contribution approach was being used to remove CGK features from the construed claims, this was neither the intent nor the basis of the Panel's preliminary analysis. The Office practice regarding the identification of essential elements is not based on an assessment of which claimed features provide a contribution above and beyond what was commonly known. On the contrary, following Office practice, commonly known features may be determined to be essential elements of a claim. However, purposive construction identifies as essential only those elements that solve the problem, whether they are commonly known or not. Some claim features, although providing context or defining the working environment, may nevertheless not be considered essential because the skilled person would understand that they are not part of the solution to the problem.

Statutory subject-matter

[18] 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.

[19] “Examination Practice Respecting Computer-Implemented Inventions”, PN2013–03 (CIPO, March 2013) [PN2013–03], clarifies the Patent Office’s approach to determining if a computer-related invention is statutory subject matter.

[20] As explained in PN2013–03, where a computer is found to be an essential element of a construed claim, the claimed subject matter is not a disembodied invention (e.g. mere ideas, schemes, plans or sets of rules, etc.), which would be non-statutory.

[21] In its RPR at pages 2-4, the Applicant addresses the patentability of so-called “business schemes” in Canadian jurisprudence, stating that any categorization of an

invention as a “business scheme” is not relevant to the legally binding test set forth by Canadian Courts. Instead, the Applicant argues that following the *Amazon.com* decision, the Courts have ruled that:

... a claimed invention is not “disembodied” or “abstract” if it either has “physical existence, or... manifests a discernible effect of change.” It is not open to the Commissioner to disagree with this legally binding ruling.
[emphasis in original]

- [22] We agree that there is no explicit exclusion of so-called “business schemes” from patentability in the *Patent Act*, and that, following the *Amazon.com* decision, a claimed invention will be disembodied or abstract if it concerns subject matter without physical existence or matter that does not manifest a discernible effect or change. To clarify, from *PN2013-03* it is understood that disembodied inventions such as mere ideas, schemes, plans or sets of rules would be non-patentable without any other statutory essential elements,

ANALYSIS

Purposive construction

The skilled person and the relevant CGK

- [23] In its RPR letter, the Applicant did not contest the Panel’s characterization of the skilled person and their relevant CGK as set out in our PR letter. Accordingly, we adopt those characterizations for this review.

- [24] In the PR letter at page 3, we identified the skilled person as:

Given the context of the invention and the background information of the description (pages 1 to 2), we preliminarily identify the skilled person as a person or team skilled in the field of e-commerce and shipping logistics, and skilled in the art of general purpose computing, software programming, and computer networking used to support such ecommerce and shipping activities.

- [25] The PR letter also identified the relevant CGK of the skilled person and our rationale, as follows:

We preliminarily identify the relevant CGK of the skilled person as including:

- knowledge of existing e-commerce systems, logistics planning and delivery methods to commercial and residential locations including

- online purchasing, order fulfillment, assigning of addresses, different costs and durations for different types of shipping methods, and general delivery capabilities and limitations; and
- knowledge of general-purpose computer hardware and computer programming techniques applied in the shipping and e-commerce environment including methods and hardware for input and storage of data, calculations and data processing, networking, and the use of predictive models in e-commerce and shipping fields.

We base this identification on the definition of the skilled person above, supported by the application's description (page 1) of what is typical in the field of e-commerce purchases of merchandise and the shipping of said merchandise to the customer. The last point is also supported by the low amount of detail in the present application concerning the implementation of the proposed methods and system. This lack of detail suggests that such implementation must be within the grasp of the skilled person and thus not in need of further explanation.

Problem and solution

- [26] Having considered the statements in the FA and the arguments put forward by the Applicant in the RFA, the problem and solution were addressed in the PR letter as follows:

Therefore, in our preliminary view, based on statements in the description and the identified CGK, the skilled person would consider that prior art methods of shipping merchandise ordered by e-commerce results in either unacceptable shipping delays for non-expedited shipping methods using common carriers, or unacceptably high delivery costs when expedited shipping is chosen to mitigate those delays.

The skilled person, in our preliminary view, would also understand from the description that the solution to this problem is an improved process to mitigate the delays by assigning a first address comprising a destination geographical area (e.g., a hub) without knowledge of the final delivery addresses. The final delivery address is then assigned to the package either while in transit or after the package arrives at the destination geographical area.

- [27] In its RPR at page 10-11 the Applicant noted that the Panel's assessment of the problem and solution differs from the FA; however, the Applicant did not specifically disagree with the problem and solution as stated in the PR letter, and we adopt them for this review. Instead, the Applicant argued that the solution to the Panel's problem would, by necessity, include statutory essential elements such as

computers for e-commerce and the shipping of packages. The essentiality of these features will be discussed under “*Essential Elements*”, below.

Essential elements

[28] Independent claims 1, 19 and 25 are directed to the same subject-matter, in a system, computer program product and method embodiment, respectively. For our analysis, we consider system claim 1 to be representative of the invention:

1. A system, comprising:

a first computer system configured to identify a destination geographical area to which to ship a package comprising one or more items destined for eventual shipment to a delivery address, wherein said destination geographical area includes multiple delivery addresses to which said package is deliverable, wherein the first computer system is configured to specify the identified destination geographical area but purposefully not completely specify any delivery address at time of shipment, such that at time of shipment the package is deliverable to said destination geographical area but is intentionally not deliverable to any delivery address; and

a second computer system configured to communicate with said first computer system via a network;

wherein said first computer system is further configured to store a record of a unique identifier that is assigned to said package prior to said package being shipped;

wherein, subsequent to said package being shipped to said destination geographical area without said delivery address being completely specified at time of shipment, such that at a time of shipment, said package is deliverable to said destination geographical area but is not deliverable to said delivery address, said first computer system is further configured to convey a complete specification of said delivery address along with said unique identifier to said second computer system; and

wherein, in response to receiving said complete specification of said delivery address, said second computer system is further configured to assign said delivery address to said package using said unique identifier, such that as a

result of said conveying the complete specification, said package becomes deliverable to said delivery address.

[29] In the PR letter at page 6, we stated the following regarding the essential elements, and in particular, addressed the Applicant's arguments concerning the essentiality of the computer components and packages:

In assessing the essential elements of the claims on file, the FA indicated that the computer-related components are not essential to solve the problem identified, but instead serve to provide the specific operating environment for the invention.

In the RFA, and as discussed above, the Applicant argued that the computer-related components are essential to the solution. The RFA also indicated that other physical features recited in the claims are essential, such as "packaging one or more items", "shipping the package" and "handing over said package to a carrier."

Regarding the first point, as we note above under "*Problem and solution*", above, the application addresses a problem pertaining to the delay in receiving purchases obtained using an e-commerce storefront model. It does not propose to solve a computer problem. The claimed computer-related components are seen to provide the context for the solution, and although providing a practical and convenient working environment (such as in e-commerce purchasing and shipping fulfillment systems), they are not essential to solving the problem.

The RFA also cited several earlier Commissioners' Decisions (CD) to support the argument that the claimed computer-related components are considered to be essential (for example, citing CD 1336 re Patent Application 2,344,781 March 22, 2013; CD 1339 re Patent Application 2,144,068 March 28, 2013; CD 1341 re Patent Application 2,222,229 March 28, 2013; and CD1345, re Patent Application 2,333,184 May 22, 2013).

On this point, we note that each review of a rejected application before the Board is determined on its own merits and facts, and that earlier published Commissioner's Decisions, while informative, are not binding or determinative of any subsequently reviewed application before the Board. We note that none of the applications of the cited Commissioner's Decisions in the RFA addressed the same problem and solution as the instant application. In our view, these cases do not guide us on the essentiality of the computer-related components in the instant application.

Regarding the second point above, we do not agree that the recited physical features are essential to the solution. We note that claim 1, for example, does not define any physical packaging, shipping or handling means. Furthermore,

we consider that the skilled person would be aware (from their CGK) that any shipping process involves actual packages, physical shipping, and physical “handling” between carriers and customers. The skilled person, in our preliminary view, would consider the use of these physical elements to be outside the concern of the problem and solution. The application proposes to solve the problem of excessive delay in obtaining merchandise ordered from an e-commerce virtual store. The application does not propose to solve a problem of packaging, shipping or physically handling packages. The solution pertains to the shipping rules or business process to mitigate these delays by assigning a first address to a package based on an identified destination geographical area and then later, assigning the final delivery address once it is determined. Therefore, the physical elements identified in the RFA may be part of the working environment of the invention but are not essential elements of the invention itself.

- [30] Further to the Panel’s preliminary assessment regarding the essential elements, above, the RPR highlighted two substantive arguments regarding the essential elements, which we paraphrase as follows:
- i) even based on the Panel’s problem and solution as set out in the PR letter, the packages and the steps of shipping said packages are essential elements to the solution; to solve the problem of excessive delay, the merchandise (packages) must be actually shipped so as to reduce the delivery time (see RPR, pages 7-12); and
 - ii) even if not a computer problem, the computers are essential to the solution, given that the problem involves reducing delays in e-commerce, the solution and essential elements would require mitigating shipping delays of e-commerce purchases. For support, the Applicant again cited Commissioner’s Decision 1345, re Patent Application 2,333,184, dated May 22, 2013 [*CD1345*], (see RPR, pages 12-13).
- [31] On the first point, the Panel disagrees. As stated in PR letter (replicated above), the solution pertains to speculatively assigning an initial address to a package based on an identified destination geographical area and then later, assigning the final delivery address to a package once it is determined. The result of this solution, if implemented in the existing shipping and delivery environment, may be a reduced delivery time. However, the solution operates by associating first and final address information to the package identification information (i.e., the unique identifier). The shipping of the packages is carried out in the normal manner and is not part of the problem or solution, but rather the operating environment in which the invention is undertaken. Only the process for addressing the package, and the

address information related to the packages (linked with the unique identifier data) has changed; the packages and physical shipping steps have not changed. The packages were always deliverable, before and after the inventive solution.

Accordingly, the numerous physical steps in the shipping process are not essential to the solution

- [32] Regarding the second point (ii) above, we agree with the Applicant that the context of the invention pertains to a problem in receiving merchandise ordered from an e-commerce virtual store. However, we disagree there are any essential computer components required to solve the problem. The skilled person understands that regardless whether an item is ordered from an e-commerce virtual store, using a telephone, mailing in an order form, or by any other form of human communication, there exists known delays in receiving the item beyond any delay in physically purchasing the item from a store. The disclosed solution is to change or improve the method of addressing said items such that these known shipping delays may be mitigated. Any claimed e-commerce computer components are considered to be the context or working environment of the invention. Thus, in the Panel's view, the skilled person would not consider the e-commerce computer components to be essential to the solution disclosed to overcome the particular shipping delays associated with e-commerce purchases.
- [33] Regarding *CDI345* cited by the Applicant, the problem and solution in that case related to the classification of plant embryos in an industrial setting wherein "embryo classification must be done in an expedient manner before they lose viability"; the utility of the invention was based on maintaining embryos, i.e., living things. The Commissioner therefore determined that the computer components were essential to solve the problem faced by the inventors. In the present case, the application is addressing a significantly different problem and solution; each review must be determined on the facts and context specific to that case. The Panel does not consider the essentiality of the computer in *CDI345* to be instructive in the present case.
- [34] Having fully considered the Applicant's additional arguments in the RPR, the Panel believes that the skilled person would consider the essential elements of independent claims 1, 19, and 25 as:
- identify a destination geographical area to which to ship a package comprising one or more items destined for eventual shipment to a delivery address, wherein said destination geographical area includes multiple delivery addresses to

which said package is deliverable, but purposefully not completely specify any delivery address at time of shipment, such that at time of shipment the package is deliverable to said destination geographical area but is intentionally not deliverable to any delivery address; and

- identify a unique identifier that is assigned to said package prior to said package being shipped;
- subsequent to said package being shipped to said destination geographical area without said delivery address being completely specified at time of shipment, convey a complete specification of said delivery address and the unique identifier; and
- in response to receiving said complete specification of said delivery address, assign said delivery address to said package using said unique identifier, such that as a result of said conveying the complete specification, said package becomes deliverable to said delivery address.

[35] As commented by the Applicant (RPR at page 8), we also note that claim 25 includes the essential elements of “packaging one or more items”, and “shipping” the packages, comprising “physically tendering said package to a carrier.” However, as explained above, we do not agree that the packaging and shipping of packages are essential steps to a solution that assigns a first destination address and later assigns the final complete delivery address to a shipment or package. The link to the actual physical packages is only through the association of the address information to the unique identifier information. The process to identify and assign the initial and final addresses is a change to the addressing steps in a shipping method; the address and unique identifier information is data, having a mental or intellectual significance. No physical articles are essential to the address assigning steps; the solution is based on the updating of information.

[36] Regarding the remaining independent claims, they define similar essential elements as claims 1, 19 and 25 respectively, with the added essential elements of:

- independent claims 45, 53 and 61: using an analysis of shipping variables, re-assign the first assigned geographical destination area to a different destination geographical area;
- independent claims 69, 70 and 71: using a predictive shipping model based on historical data to predict a latency to a delivery address for a given

package and use the model to predict the proximity to the delivery address of second group of packages headed to a geographical area; and

- independent claims 72, 73 and 74: using historical shipping data, forecasting customer demand for items and using that information in the assigning of destination geographical areas to which to ship said items.

[37] Regarding the dependent claims, the Applicant did not provide any further arguments following the Panel's analysis provided in the PR letter; accordingly, as set out in the PR letter:

The dependent claims define limitations on the scheme to assign addresses to packages in order to mitigate the shipping delays, including the data used for the unique identifier, variables used to assess shipping costs, rules for assigning the addresses, and rules and parameters for using both historical shipping data analysis and predictive model analysis. None of the dependent claims are considered to define any physical essential elements.

[38] In summary, the skilled person would understand that the essential elements of claims 1 to 74, as purposively construed, are the improved steps in a shipping method which speculatively identify/assign a first destination geographical area for a package and subsequently, when further information becomes available, identify/assign a final delivery address for the package. The essential elements pertain to the change to the address information for packages associated using unique identifier information of the packages; the recited physical elements - the packages themselves, the shipping of the package and the computer-related components - are considered to be non-essential elements

Statutory subject-matter

[39] In its RPR, in addition to raising arguments relating to Office practice (see paragraphs [13] and [21], above), the Applicant maintained its earlier arguments from the RFA with respect to statutory subject-matter. In particular, at pages 4-7 of the RPR, the Applicant argues that the essential elements as identified by the Panel define statutory subject-matter, namely the feature pertaining to:

- assigning a unique identifier to said package; and
- the package becomes deliverable to said delivery address.

[40] Regarding the unique identifier, the Panel notes from the specification (paragraphs 33-35) that the unique identifier is marking data or information such as a bar code

or other machine readable data, known in package scanning operations. At no time does this information physically change on the package. Based on the solution, the unique identifier information assigned to the package is used to associate the initial destination geographical information to a package, and later, the same unique identifier is used to associate the updated final delivery address to the package. The essential element is data and information, having an intellectual significance, and comprising no physical embodiment or discernible effect or change.

[41] Regarding the package as “deliverable”, we first consider the essential element in its entirety as construed above:

in response to receiving said complete specification of said delivery address, assign said delivery address to said package using said unique identifier, such that as a result of said conveying the complete specification, said package becomes deliverable to said delivery address.

[42] In the Panel’s view, the skilled person would understand that this essential element defines the assignment of the final delivery address information to the packages using the unique identifier information. As a result, the improved solution is achieved; subsequently, the package “becomes deliverable” to a final address, presumably by known shipping methods. However, the skilled person would not construe the features as having any physical existence or manifesting a discernible effect or change in the packages, nor would they construe the claim as having any physicality. Instead, what has changed is the intellectual meaning of the addressing data associated with the unique identifier data; data, like all information is disembodied and thus considered to be abstract.

[43] Therefore, as stated in the PR letter, the Panel is of the view that the essential elements of claims 1-74 do not comprise matter with physical existence or comprise matter that manifests a discernible effect or change. Rather, the essential elements are considered to be the intangible administrative rules to speculatively assign a destination geographical area address for a package without knowing the final delivery address, and then at a later time, assigning a final, complete delivery address. The essential elements embody the change in the rules for shipping, and the data elements used in those rules.

[44] Rules, plans and information having only intellectual meaning are considered outside the definition of invention under section 2 of the *Patent Act*. Similarly, carrying out a plan or theory of action without the production of any physical

results proceeding directly from the operation of the theory or plan itself is outside the definition of invention under section 2 of the *Patent Act*.

Conclusion

[45] Therefore, we consider that claims 1 to 74 on file do not define statutory subject-matter and thus do not comply with section 2 of the *Patent Act*.

RECOMMENDATION OF THE BOARD

[46] In view of the above, the Panel recommends that the application be refused on the basis that claims 1 to 74 define non-statutory subject matter and thus do not comply with section 2 of the *Patent Act*.

Andrew Strong
Member

Paul Fitzner
Member

Mara Gravelle
Member

DECISION OF THE COMMISSIONER

- [47] I concur with the findings of the Board and its recommendation to refuse the application. The claims on file do not comply with section 2 of the *Patent Act*.
- [48] 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 13th day of January 2020