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Commissioner's Decision #1537  
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Date: 2020-05-11

TOPIC: J00 Meaning of Art

J50 Mere Plan

SUJET: J00 Signification de  
la technique

J50 Simple plan

Application No. : 2,492,638  
Demande n° 2 492 638

IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application number 2,492,638, 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 been reviewed in accordance with paragraph 199(3)(c) of the *Patent Rules* (SOR/2019–251). The recommendation of the Patent Appeal Board and the decision of the Commissioner are to refuse the application.

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## INTRODUCTION

- [1] This recommendation concerns the review of rejected patent application number 2,492,638, entitled “Parcel or Service Delivery with Partially Scheduled Time Windows” and owned by United Parcel Service of America, Inc.
- [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*. The issue to be considered is whether the claims are directed to non-statutory subject matter. As explained below, our recommendation is that the application be refused.

## BACKGROUND

### The application

- [3] Patent application 2492638 (the instant application), based on a previously filed Patent Cooperation Treaty application, is considered to have been filed in Canada on July 14, 2003 and was laid open to the public on February 19, 2004.
- [4] The instant application relates to delivery scheduling systems and more particularly to systems for scheduling deliveries to be made within specified time windows.

### Prosecution history

- [5] On March 22, 2016, a Final Action (FA) was written pursuant to subsection 30(4) of the former *Patent Rules*. The FA stated that the application was defective on the grounds that claims 1-26 dated September 10, 2015 (the claims on file) encompass subject matter that lies outside the definition of “invention” and thus do not comply with section 2 of the *Patent Act*.
- [6] In a September 20, 2016 response to the FA (RFA), the Applicant submitted a first set of proposed claims. The Applicant submitted that this first set of proposed claims is allowable.
- [7] As the Examiner considered the application not to comply with the *Patent Act* and *Patent Rules*, the application was forwarded to the Board for review on March 10, 2017, pursuant to subsection 30(6) of the former *Patent Rules*, along with an explanation outlined in a Summary of Reasons (SOR) that maintained the rejection based on the defect identified in

the FA.

- [8] With a letter dated March 13, 2017, the Board sent the Applicant a copy of the SOR and asked the Applicant to confirm continued interest in having the application reviewed. In a response dated April 12, 2017, the Applicant confirmed its continued interest in having the application reviewed.
- [9] A Panel was formed to review the application under paragraph 199(3)(c) of the *Patent Rules* and to make a recommendation to the Commissioner as to its disposition.
- [10] In a Preliminary Review letter (PR letter) dated June 7, 2019, the Panel set out its preliminary analysis and rationale as to why, based on the written record, both the claims 1-26 on file and the first set of proposed claims do not define statutory subject matter and thus do not comply with section 2 of the *Patent Act*. The PR letter offered the Applicant the opportunities to attend an oral hearing and to make further written submissions.
- [11] In a response to the PR letter (RPR) dated July 3, 2019, the Applicant argued that the claims on file are allowable. The Applicant also asserted that if the Panel finds that the claims on file are not allowable, a second set of proposed claims submitted by the Applicant is allowable.
- [12] The Applicant declined an oral hearing through correspondence dated June 20, 2019 and confirmed in a letter dated July 3, 2019.

## **ISSUES**

- [13] The issue to be considered by this review is whether the claims 1-26 on file define subject matter that falls outside the definition of “invention” and thus are non-compliant with section 2 of the *Patent Act*.
- [14] We will also consider the second set of proposed claims and whether they constitute amendments necessary for compliance with the *Patent Act* and *Patent Rules*.

## **LEGAL PRINCIPLES AND PATENT OFFICE PRACTICE**

### Purposive construction

- [15] 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 paras 49(f) and (g) and 52). In accordance with the *Manual of Patent Office Practice*, revised June 2015 (CIPO) [*MOPOP*] at §12.02, the first step of purposive claim construction is to identify the person skilled in the art and his or her relevant common general knowledge (CGK). The next step is to identify the problem addressed by the inventor and the solution put forth in the application. Essential elements can then be identified as those required to achieve the disclosed solution as claimed.

#### Non-statutory subject matter

[16] 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.

[17] Following the Federal Court of Appeal decision in *Canada (AG) v Amazon.com*, 2011 FCA 328 [*Amazon.com*], the Patent Office released an examination memo “Examination Practice Respecting Computer-Implemented Inventions” PN 2013-03 (CIPO, March 2013) [*PN 2013-03*] that clarified the Patent Office’s approach to determining if a computer-related invention is statutory subject matter.

[18] As stated in *PN 2013-03*, Patent Office practice considers that 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, the fine arts, methods of medical treatment, mere ideas, schemes or rules, etc.), the claimed subject matter will not be compliant with section 2 of the *Patent Act*.

## **ANALYSIS**

### Overview of the instant application

[19] Businesses use a variety of tools to arrange delivery of items and services to recipients. For example, a goods or service provider may contact the customer to arrange a time for delivery of the goods or service (instant application, page 1, lines 8-14).

- [20] In the case of parcel delivery, a parcel delivery service will typically use a delivery scheduling system to develop a route and schedule for package delivery between a consignor (or sender) and a consignee (or recipient). In developing the route and schedule, prior art scheduling systems implement standard logistical modeling techniques to accomplish, for example, optimization of the delivery route. Prior art systems also consider time constraints imposed by the consignor. For example, the consignor may specify that the package must be delivered before 10am the next day. The scheduling system will schedule a delivery before this deadline, even if the delivery route is no longer cost-effective. Thus, prior art scheduling systems assure that packages are delivered in the most cost-effective manner possible while meeting any established delivery deadlines by the consignor (instant application, page 1, line 15 to page 2, line 7).
- [21] However, the consignee is often unavailable to receive the package according to the delivery deadline established by the consignor. Failed deliveries are undesirable as they result in untimely receipt of a package by the recipient and it also results in increased delivery costs to the parcel delivery service. In addition, the intended recipient may have no preference about a delivery time, in contrast to the delivery deadline as specified by the sender (instant application, page 2, line 8 to page 3, line 15).
- [22] The instant application identifies “a need for a parcel delivery scheduling system that is configured to schedule deliveries to be made generally according to rules set forth by the consignor, but also according to the availability of the consignee to receive and use the package” (instant application, page 3, lines 16-19).
- [23] The instant application is directed to “a scheduling system that is configured to schedule services (such as the delivery of a package) to be provided generally according to rules set forth by the sender of the service (such as a consignor), and also according to the availability of the intended recipient (such as a consignee) to receive and use the service” (instant application, page 4, lines 27-31).
- [24] There are 26 claims on file. There are four independent claims: computer system claims 1 and 12 and the corresponding computer program product claims 6 and 13. Claim 1 reads as follows:

A computer system for communicating with an intended recipient of an item, comprising:

a data acquisition device configured to receive, from a sender, electronic data associated with delivery information and a delivery request that an item be delivered to a recipient with a selected level of service;

a delivery scheduling server connected to said data acquisition device via a communications system, including at least a memory on which is stored electronic data associated with a planned delivery route, said planned delivery route including a plurality of regular stops and a predetermined path extending between said regular stops on a projected time schedule, said delivery scheduling server configured to:

(a) utilize said electronic data associated with said delivery information and said delivery request to determine

(i) whether said delivery requires departure from said planned delivery route; and

(ii) whether, independent of parameters of said level of service, one or more cost-effective time windows exist in which a cost of delivery of said item to said recipient is equal to or below a predetermined cost threshold; and

(b) in response to determining

(i) said delivery requires departure from said planned delivery route and

(ii) one or more of said cost-effective time windows exist, automatically initiate the transmission of electronic data associated with a message indicating that said recipient may schedule delivery of said package to said recipient within one of said one or more cost-effective time windows; and

a recipient data receiving device connected to said delivery scheduling server via a communications system, said recipient data receiving device configured to receive said electronic data associated with said message.

[25] Dependent claims 2-5, 7-11 and 14-26 define further limitations on elements of the independent claims including identifying the contact information of the recipient, scheduling the delivery, and means for communicating between devices.

[26] For the purposes of this review, we consider that independent claim 1 is representative of all the independent claims on file (that is, the computer system claims 1 and 12 and the corresponding computer program product claims 6 and 13), as the independent claims all recite subject matter generally similar to the subject matter recited in claim 1, albeit expressed as different embodiments. In addition, as the dependent claims define further limitations but do not add essential elements that would affect our assessment of non-statutory subject matter, we also consider claim 1 representative of all the claims on file.

#### Purposive construction

#### *Applicant's submissions on Patent Office practice*

- [27] The Applicant submitted in the RFA at pages 7-10 that the purposive claim construction carried out in accordance with Patent Office practice does not accord with Canadian law. In particular, the Applicant argued that the Patent Office practice 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 Corp and Scientific Games Products (Canada) ULC*, 2016 FC 883 and *Amazon.com*).
- [28] As explained in the PR letter at pages 5-6, 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 claim 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.
- [29] The Applicant also submitted in the RPR at pages 2-12 that the purposive construction carried out in the PR letter "effectively applies the inappropriate 'contribution' approach" (RPR at page 5) "which has been categorically rejected by the Canadian courts and by the Patent Office's own guidelines" (RPR at page 2).
- [30] We agree that the contribution approach is improper in a purposive construction analysis. As stated in the PR letter, the guidance of *MOPOP* at §12.02 outlines the Patent Office's interpretation of Canadian patent law in respect of purposive claim construction as applied to the examination of a patent application. The Patent Office practice specifies that a properly informed purposive claim 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 CGK 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.



*The person skilled in the art and their common general knowledge*

[31] The PR letter at page 6 considered two prior art references, D4 and D5, that were identified in the FA to demonstrate the common general knowledge:

D4: CA 2 374 114 Ham et al. November 16, 2000

D5: WO 01 99006 Arunapuram et al. December 27, 2001

[32] The PR letter at page 6, citing the FA, characterized the person skilled in the art as “a team of transportation logistics planners and computer programmers”.

[33] The PR letter at pages 6-8 analysed the skills and knowledge for each team member of the person skilled in the art, considering D4, D5, and the instant application, and identified the following as CGK:

In light of the above, in our preliminary view, the CGK for the transport planners includes:

- the use of the Internet for a customer to place orders for goods and then having the purchased goods delivered to the customer’s shipping address via a parcel delivery service (D4, background);
- the use of transportation planning managers to manually make decisions related to the transportation of goods and services, balancing such factors as cost, reliability and expediency (D5, background); and
- the use of automated product transport management systems as part of scheduling the transport of goods to customers with Internet orders (D5, background; instant application, background).

Also, our preliminary view is to accept the CGK for the computer programmers as identified in the FA, namely, familiarity with standard networking architectures, tailoring of software applications to meet specific transport logistical requirements, database programming, as well as common computing equipment hardware.

[34] The Applicant in the RPR at page 7 made submissions regarding the characterization of such a team and their skills:

While the Applicant understands that the skilled person can be a team of individuals in limited circumstances, caution should be exercised that the characterization of the skilled person does not impute multidisciplinary skills to this team that would go beyond the skills ordinarily found in any one individual of this team.

Moreover, within a team of multiple individuals, collaboration amongst team members is required in order to match the skills of the different members. Inventiveness can exist in such collaboration. In the case where the members of the team come from different fields of

endeavour, claim elements that are the result of collaboration amongst these team members should be recognized as more likely to have inventiveness. It also follows that the common general knowledge should not be automatically framed as an aggregation of the knowledge of these individuals. (emphasis in the original).

[35] We consider two issues as raised by the Applicant's submissions: First, whether the PR letter's characterization of the person skilled in the art is reasonable. And second, whether it is reasonable to frame the common general knowledge as an aggregation of skills associated with individual team members comprising the person skilled in the art.

[36] We consider the relevant guidance regarding these two issues. The Panel notes that MOPOP §12.02.02b provides guidance for the identification of the person skilled in the art:

The person skilled in the art (POSITA) is a fictitious construct that represents an average worker competent in the field or fields relevant to the invention. The person skilled in the art can represent an individual, or a team of individuals whose conjoint knowledge is relevant to the invention in suit (citing, in part, *Bayer Aktiengesellschaft v Apotex Inc.* [1995] 60 CPR (3rd) at page 79). (emphasis added; additional citations removed)

[37] The Panel considers as particularly relevant the citation above in *Bayer Aktiengesellschaft v Apotex Inc.* [1995] 60 CPR (3rd) 58 [*Bayer*] at page 79:

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

[38] The Panel further considers as relevant Commissioner's Decision 1379 (reported as [2015] 136 CPR (4th) 188) at paras 22-24:

[22] We agree that the skilled person can comprise a team. For instance, in *AstraZeneca Canada Inc. v. Apotex Inc.* 2014 FC 638, (F.C.), Justice Rennie found that the skilled person's expertise included knowledge from several fields (chemistry, pharmacology and medicine). However, in so finding, the judge stated, at para. 53, that "a composite skilled person in this case reflects the diverse team of experts likely employed by pharmaceutical companies to develop and test drugs." It is understood from this decision that such a team is reflective of one that would have existed in the real world at the relevant date, i.e., a team of experts likely employed by the relevant type of company. In the present case we agree with the Applicant's submission that the team as proposed in the Final Action is not reasonable because it is of a fictional nature and not reflective of one that would have existed in the real world.

[23] In our view, the person skilled in the art is a specialist in industrial plant cooling systems, and this person has knowledge of such systems, including knowledge of systems and methods for feeding the apparatuses with seawater or fresh surface water, problems associated with such systems, including the accumulation of shellfish in the apparatuses, and conventional methods used to remove such undesired deposits. According to the description, conventional methods for dealing with the accumulation of shellfish in cooling systems included adding chemicals to the water, heating the water, and using mechanical means such as brushes [p. 1, lines 13-23].

[24] The skilled person does not comprise a team including a “shellfish specialist”. There is nothing on the record to suggest that at the time of the applicant's invention there were teams comprising skilled persons in the field of industrial plant cooling systems fed with seawater or fresh surface water and skilled persons in the field of shellfish farming. Therefore, the common general knowledge of the person skilled in the art of industrial plant cooling systems does not include all of the knowledge possessed by the person skilled in the art of shellfish farming.

- [39] Considering the first question of whether the PR letter’s characterization of the person skilled in the art is reasonable, we note that the Applicant acknowledged in the RPR at page 7 that the person skilled in the art can be comprised of individual teams members, consistent with both the guidance of *MOPOP* §12.02.02b and the jurisprudence in *Bayer*. Given that the instant application and the cited prior art pertains to both delivery planning and the computer systems for delivery planning, it is our view that the identified person skilled in the art comprising a team of transportation logistics planners and computer programmers accords with a real world team that would have existed at the relevant date, consistent with the guidance of *MOPOP* §12.02.02b and the view expressed in Commissioner’s Decision 1379.
- [40] Considering the second question of whether it is reasonable to frame the common general knowledge as an aggregation of skills associated with these individual team members, all but one common general element identified in the PR letter appears to lie within the skills of one or the other individual team member. We consider that the Applicant may have been concerned regarding the identified element “the use of automated product transport management systems as part of scheduling the transport of goods to customers with Internet orders (D5, background; instant application, background)”. Inasmuch as the Applicant saw this element as the result of an improper inventive collaboration, in our view, this elements accords with both the guidance of *MOPOP* §12.02.02b (“conjoint knowledge”) and the jurisprudence in *Bayer* (“combined expertise”) supporting a view that the aggregation of individual team members’ skills is appropriate.

[41] Furthermore, “[t]he Applicant readily admits that automated parcel delivery management systems are known as of the claim date or the publication date of the application” (RPR at page 17).

[42] In light of the analysis above, consistent with our view expressed in the PR letter, our view is that the person skilled in the art is a team of transportation logistics planners and computer programmers. We also view that the common general knowledge of this team includes:

- the use of the Internet for a customer to place orders for goods and then having the purchased goods delivered to the customer’s shipping address via a parcel delivery service (evidenced by, for example, D4 background);
- the use of transportation planning managers to manually make decisions related to the transportation of goods and services, balancing such factors as cost, reliability and expediency (evidenced by, for example, D5 background);
- the use of automated product transport management systems as part of scheduling the transport of goods to customers with Internet orders (evidenced by, for example, D5 background; instant application background); and
- a familiarity with standard networking architectures, tailoring of software applications to meet specific transport logistical requirements, database programming, as well as common computing equipment hardware.

*Problem and solution*

[43] The PR letter at page 9 analysed the problem and solution as follows:

According to *MOPOP* [§12.02.02d, formerly §13.05.02b], the CGK provides a baseline of information such that the skilled person will read the specification in the expectation that it sets out something beyond the commonly known solutions to the commonly known problems.

As we noted above, the CGK includes the use of automated product transport management systems as part of scheduling transport of goods to customers, as acknowledged in the instant application and D5. This CGK element was also re-affirmed by the Applicant in the RFA (RFA, page 2, para 3). The person skilled in the art would thus not see the problem being addressed by the instant application as lying in the implementation of a computerized scheduling system, but rather would see the problem as a need for improving the scheduling of deliveries by accounting for the preferences of both the consignor and the consignee.

Our preliminary view is that the problem relates to a need to schedule services, such as the delivery of a package, to be provided generally according to rules set forth by the sender of

the service, such as a consigner, but also according to the availability of the intended recipient, such as a consignee, to receive and use the service. This problem is consistent with the problem identified in the instant application (instant application, page 4, lines 20-24) and the problem identified in the FA.

What appears to be the solution, in our preliminary view and in accordance with the instant application, is to determine and communicate to the recipient one or more cost-effective time windows for a delivery so that the recipient may schedule delivery of the package within one of the time windows. Again, this solution is consistent with the solution identified in the instant application (instant application, page 4, line 27 to page 5, line 7) and the solution identified in the FA.

[44] The Applicant in the RPR at pages 7-14 disagreed with 1) the analysis by which the Panel arrived at the identified problem and solution and 2) the characterization of the problem and solution as identified in the PR letter.

[45] Considering first the Applicant's contention that the analysis used to identify the problem and solution is improper, the Applicant in the RPR at pages 7-12 "submit[ted] that the Panel's determination of the problem and the solution addressed by the claimed invention is where the Panel's analysis becomes the application of the 'contribution' approach. This determination is problematic because the Panel sets the CGK as the baseline or the 'threshold' for identifying the problem and the solution, such that the analysis effectively becomes an exercise in finding the 'contribution' of the claim." (RPR at page 7) The Applicant summarized the improper analysis approach in the RPR at page 9:

The Applicant respectfully submits that this approach of:

- establishing the CGK as a "minimum threshold";
- carving out anything falling within the CGK from any possible problem or solution; and
- seeking out only to elements that go beyond the CGK;

effectively is the application of the inappropriate "contribution" approach. (emphasis removed)

[46] The guidance at *MOPOP* §12.02.02d is directed to identifying the problem and solution that accounts for the person skilled in the art and their common general knowledge:

The purpose of the *Patent Act* is to provide exclusive rights to an inventor for a new and useful invention in exchange for a disclosure that allows the public to use or operate the invention as contemplated by the inventor. Thus, recognizing that a patentable invention is an inventive solution to a practical problem, it follows that an invention must be disclosed (and ultimately claimed) so as to provide the person skilled in the art with an operable solution.

The identification of the problem and the solution provided by the invention informs the purposive construction of the claims.

The identification of the problem faced by the inventor is guided by the examiner's understanding of the common general knowledge in the art and by the teachings of the description.

The common general knowledge in the art provides the baseline of information to which the description is expected to add. The person skilled in the art will read the specification in the expectation that it sets out something beyond the commonly known solutions to commonly known problems.

...

The examiner will give consideration to what the inventor states about the background of the invention, the "objects of the invention", any specific problems, needs, limitations or disadvantages known in the art or discovered by the inventor, etc. in identifying the problem faced by the inventor. (citations removed)

[47] As discussed previously, we have adopted for the purposes of this review, and as acknowledged by the Applicant, that at least one element of the CGK is the use of automated product transport management systems for scheduling the transport of goods to customers with Internet orders (evidenced by, for example, D5 background; instant application background).

[48] Given at least this element of the CGK, the commonly known solution of using an automated product transport management system to schedule delivery services addresses the commonly known problem of scheduling transport of goods and services to customers accounting for the rules set forth by the sender of the service. In our view, this is acknowledged in both the instant application and D5. As guided by *MOPOP* §12.02.02d, our identification of the problem in the instant application considers what the person skilled in the art will read in the specification in the expectation that it sets out something beyond this commonly known solution to this commonly known problem.

[49] After reviewing the current state of scheduling deliveries of items and services, the instant application provides the following problem statements related to the scheduling rules:

Accordingly, there is a need for a parcel delivery scheduling system that is configured to schedule deliveries to be made generally according to rules set forth by the consignor, but also according to the availability of the consignee to receive and use the package. (instant application, page 3, lines 16-19).

...

Accordingly, there is a need for a scheduling system that is configured to schedule services (such as the delivery of a package) to be provided generally according to rules set forth by the sender of the service (such as a consignor), but also according to the availability of the intended recipient (such as a consignee) to receive and use the service. (instant application, page 4, lines 20-24).

- [50] The Applicant's submission in the RPR at page 19 is also consistent with a problem associated with scheduling rules:

As described above, limitations of existing automated parcel delivery management systems is that they do not accommodate irregular deliveries, that they are constrained by delivery rules imposed by the consignor and that they do not permit input from a recipient for facilitating delivery outside the consignor imposed rules.

- [51] Consistent with the submissions by the Applicant, in our view, the person skilled in the art would view the problem described in the instant application relates to scheduling rules that only accounts for rules set forth by the sender but do not consider the availability of the intended recipient.
- [52] Given this identified problem, it is our view that the solution relates to scheduling deliveries accounting for both the rules set forth by the sender of the service and the availability of the intended recipient. In accordance with the instant application, the particular solution proposed is to determine and communicate to the recipient one or more cost-effective time windows for a delivery so that the recipient may schedule delivery of the package within one of the time windows (instant application, page 4, line 27 to page 5, line 7).
- [53] Considering second the Applicant's contention that the identified problem and solution is incorrect, the Applicant in the RPR at pages 12-14 submitted that the claimed invention provides a solution to a practical problem characterized as follows (RPR at page 13):

The Applicant respectfully submits that the practical problem being addressed by the Applicant's claimed invention should be generally reframed as **"within the field of automated parcel delivery systems, in which a parcel delivery service operates thousands of routes supported by regular customers but that also include the burden of sporadic non-daily deliveries and in which the delivery routes are planned using a computer-implemented routing and scheduling module, there is a need for the ability to plan routes and schedules according to the availability of the intended recipient (ex: a consignee)."** (emphasis in original)

- [54] Although the Applicant proposes that the automated parcel delivery management system

must be emphasized in its reframing of the problem, we note that central to the reframed problem statement is “a need for the ability to plan routes and schedules according to the availability of the intended recipient (ex: a consignee)”. This central tenant proposed by the Applicant is consistent with the problem we identified above.

[55] Our analysis of the problem differs regarding the role of the automated parcel delivery management system in defining the problem as described in the instant application. As discussed above, the person skilled in the art reads the specification in the expectation that it sets out something beyond the commonly known solution of using an automated product transport management system to the commonly known problem of scheduling the transport of goods and services to customers accounting for the rules set forth by the sender of the service. In this case, the person skilled in the art would not view the automated product transport management system as part of the problem to be solved. Rather, the automated product transport management system provides the working environment or context within which the problem is exposed. The Applicant’s reframing of the problem above, prefaced by “within the field of automated parcel delivery systems”, confirms such a context. The problem to be solved exists even without the automated product transport management system and relates to scheduling rules that only accounts for rules set forth by the sender but do not consider the availability of the intended recipient.

[56] To summarize, in light of our analysis above, we view that the problem as seen by the person skilled in the art relates to a need to schedule delivery of services or items, such as the delivery of a package, to be provided generally according to not only the rules set forth by the sender of the service, such as a consigner, but also according to the availability of the intended recipient, such as a consignee, to receive and use the delivered service or item.

[57] We also view that the solution as seen by the person skilled in the art is to determine and communicate to the recipient one or more cost-effective time windows for a delivery so that the recipient may schedule the delivery within one of the time windows.

#### *Essential elements*

[58] The PR letter at pages 9-11 identified the essential elements as those required to achieve the disclosed solution as claimed:

The FA at pages 4-5 identified the essential elements as follows:



As purposively construed, the essential elements of the independent claims that solve said problem comprise:

- receiving from a sender, data associated with delivery information and a delivery request that an item be delivered to a recipient with a selected level of service;
- utilizing said data associated with said delivery information and said delivery request to determine (i) whether said delivery requires departure from a planned delivery route, said planned delivery route including a plurality of regular stops and a predetermined path extending between said regular stops on a projected time schedule; and (ii) whether, independent of parameters of said level of service, one or more cost effective time windows exist in which a cost of delivery of said item to said recipient is equal to or below a predetermined cost threshold;
- in response to determining (i) said delivery requires departure from said planned delivery route and (ii) one or more of said cost effective time windows exist, conveying a message indicating that said recipient may schedule delivery of said package to said recipient within one of said one or more cost effective time windows;
- and optionally in response to a selection of a cost effective time window made by the recipient, scheduling the delivery service accordingly.

...

Therefore, our preliminary view is that the essential elements of claims 1-26, as purposively construed, are as identified in the FA, that is, the steps and rules for determining and communicating to the recipient one or more cost-effective time windows for a delivery so that the recipient may schedule delivery of the package within one of the time windows.

[59] The Applicant argued in the RPR at pages 14-20 that the computer devices (e.g., the data acquisition device, the delivery scheduling server, the communications system, etc.) as recited in the claims on file (and similarly in the second set of proposed claims) are essential to providing a solution to a practical problem as reframed by the Applicant. In particular, the Applicant submitted in the RPR at page 17 the following:

In fact, the Applicant's solution relies on modifying and/or improving the computer-implemented routing and scheduling module within the integrated whole system to allow for planning for deliveries that require departure from the planned delivery route. As such, the computer-implemented routing and scheduling module is critical to the solution.

[60] Furthermore, the Applicant argued in the RPR at page 18 that the recited computer-implemented system is essential to address aspects of a practical problem as reframed by the Applicant, for example, by scheduling a large volume of routes in a cost-efficient manner and by automatically communicating the cost-effective time windows to the

recipient to allow for the selection of a desired time window.

- [61] With respect to these Applicant's arguments that the recited computer-implemented elements are essential to a practical problem, the Panel notes that according to *Amazon.com*, an abstract idea which is realized by programming it into a computer by means of a formula or algorithm does not become patentable subject matter "merely because it has a practical embodiment or a practical application" (*Amazon.com* at para 61).
- [62] In the instant application, the steps and rules for determining and communicating to the recipient one or more cost-effective time windows for a delivery are analogous to the "abstract idea" of *Amazon.com* that is implemented within the recited computer-implemented system. Thus, according to *Amazon.com*, such a practical embodiment does not make patentable the abstract steps and rules used to achieve the identified solution as claimed.
- [63] The Applicant also argued in the RFA at pages 6-12 and in the RPR at pages 19-20 that the computer devices recited in the claims are essential to the claims on file as any substituted means would have a material effect on the claimed invention. In particular, the Applicant argued in the RFA at pages 4-5 and 13-14 that the FA's reference to one feature's non-computerized alternative as described in the instant application neither overrides the embodiment recited in the claim nor provides evidence that other claimed features have non-computerized alternatives.
- [64] As explained in the PR letter at page 10, the use of communication devices, the Internet and the other physical computer-implemented elements is outside the concern of the problem and solution as identified above. The instant application proposes to solve a problem of scheduling services generally according to rules set forth by the sender but also according to the availability of the intended recipient. The instant application does not propose or provide any implementation details to solve a problem of automatically computing data or of communicating information from one device. Therefore, use of the recited physical computer-implemented elements may be part of the context or working environment of the invention, but are not essential elements of the invention itself. As stated in *MOPOP* at §12.02.02e, not every element that has a material effect on the operation of a given embodiment is necessarily essential to the solution.
- [65] The Applicant further argued in the RFA at page 14 that the claimed "real-time" feedback involves the transmitting and receiving of information between separate computers points

to the computer being essential, consistent with the findings in the Commissioner's Decisions *Re RPX's Patent Application 2 222 229* (2013), C.D. 1341 (Commissioner of Patents) [*RPX*] and *Re eBay's Patent Application 2 263 903* (2014), 127 C.P.R. (4th) 215, C.D. 1369 (Commissioner of Patents) [*eBay*].

- [66] As explained in *MOPOP* at §12.02.02d, a properly informed purposive construction must consider the application as a whole – including the problem addressed by the application and its solution. As discussed above, in the instant application and as acknowledged by the Applicant, the problem is not directed to “real-time” feedback but instead relates to the rules used to schedule delivery of services or items. Thus, the recited elements argued by the Applicant to address “real-time” feedback are not considered essential.
- [67] Furthermore, as also explained in *MOPOP* §12.02.02d, purposive construction “cannot be determined solely on the basis of a literal reading” of the claims. The form of the claim language chosen by the inventor cannot override all other considerations during purposive construction of the claims. Unlike in the instant application, the problems addressed by the inventions in the referenced cases concern the operation of physical computerized systems, and their inventions thus count physical – and statutory – computerized components among their essential elements (*RPX* at paragraphs 77 to 78; *eBay* at paragraphs 33 to 34).
- [68] In light of our analysis above, we view that the essential elements of claims 1-26 on file, as purposively construed, are as identified in the PR letter, consistent with the findings in the FA, that is, the steps and rules for determining and communicating to the recipient one or more cost-effective time windows for a delivery so that the recipient may schedule delivery of the package within one of the time windows:
- receiving from a sender, data associated with delivery information and a delivery request that an item be delivered to a recipient with a selected level of service;
  - utilizing said data associated with said delivery information and said delivery request to determine (i) whether said delivery requires departure from a planned delivery route, said planned delivery route including a plurality of regular stops and a predetermined path extending between said regular stops on a projected time schedule; and (ii) whether, independent of parameters of said level of service, one or more cost effective time windows exist in which a cost of delivery of said item to said recipient is equal to or below a predetermined cost threshold;
  - in response to determining (i) said delivery requires departure from said planned delivery route and (ii) one or more of said cost effective time windows exist, conveying a message

indicating that said recipient may schedule delivery of said package to said recipient within one of said one or more cost effective time windows; and

- optionally in response to a selection of a cost effective time window made by the recipient, scheduling the delivery service accordingly.

#### Non-Statutory subject matter

[69] The FA at page 5 concluded that the essential elements of the claims on file are “considered to be an abstract idea comprising a set of administrative rules that do not in and of themselves meet the requirements of section 2 of the *Patent Act*”.

[70] The Applicant submitted in the RPR at page 17 that “recognition that the solution is to be carried out by operating a computer-implemented parcel delivery management system formed of a combination of computer-implemented elements is sufficient to find that the recited computer-implemented elements are essential and that the claim is directed to patent-eligible subject matter under section 2 of the *Patent Act* (as a machine, process or art).”

[71] Given our identification that the essential elements of the claims on file are directed to a scheme, that is the steps and rules for determining and communicating to the recipient one or more cost-effective time windows for a delivery so that the recipient may schedule delivery of the package within one of the time windows, our view is that, as concluded in the PR letter (and also in the FA and the SOR), claims 1-26 on file do not define statutory subject matter, and thus do not comply with section 2 of the *Patent Act*.

#### Proposed claims

[72] A second set of proposed claims 1-26 was submitted by the Applicant with the RPR. In accordance with paragraph 86(7)(b) of the *Patent Rules*, they have not been entered as an amendment. However, in accordance with subsection 86(11) 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.

[73] As the second set of proposed claims could be considered for amendment if it is determined that it overcomes the non-statutory subject matter defect noted above and does not introduce any other defects, the Panel provides its views on the second set of proposed

claims.

- [74] As explained in the RPR at pages 15-16, the second set of proposed claims proposed amendments to the independent claims to explicitly recite a computer-implemented routing and scheduling module used to determine the planned delivery route and to determine the cost-effective time windows.
- [75] The Panel notes that the proposed amendments merely refine the recited computer-implemented system but otherwise does not alter our views regarding the problem, solution and essential elements as identified for the claims on file. Given that we consider the problem, solution and essential elements of the second set of proposed claims to be identical to those identified in the analysis above with respect to the claims on file, it is our view that the essential elements of the second set of proposed claims are also directed to a scheme, that is the steps and rules for determining and communicating to the recipient one or more cost-effective time windows for a delivery so that the recipient may schedule delivery of the package within one of the time windows.
- [76] Therefore, for the reasons set out above, we view that the second set of proposed claims 1-26 would define non-statutory subject matter and therefore are non-compliant with section 2 of the *Patent Act*. As such, they do not overcome the non-statutory subject matter defect for the claims on file and are therefore not “necessary” for compliance with the *Patent Act* and *Patent Rules* as required by subsection 86(11) of the *Patent Rules*.

## CONCLUSIONS

- [77] This review has determined that claims 1-26 on file define subject matter falling outside the definition of “invention”, thus the claims on file are non-compliant with section 2 of the *Patent Act*.
- [78] We have also determined that the second set of proposed claims 1-26 does not overcome the non-statutory subject matter defect and therefore the second set of proposed claims do not constitute a specific amendment that is “necessary” pursuant to subsection 86(11) of the *Patent Rules*.

## RECOMMENDATION OF THE BOARD

- [79] In view of the above, the Panel recommends that the application be refused on the basis that claims 1-26 on file define subject matter falling outside the definition of “invention”,

thus non-compliant with section 2 of the *Patent Act*.

[80] Further, the second set of proposed claims does not overcome the non-statutory subject matter defect and therefore the Panel declines to recommend the introduction of these claims since they do not constitute a specific amendment that is “necessary” pursuant to subsection 86(11) of the *Patent Rules*.

Lewis Robart

Marcel Brisebois

Minghui Shi

Member

Member

Member

## **DECISION OF THE COMMISSIONER**

[81] I concur with the findings and recommendation of the Board that the application should be refused because claims 1-26 on file define subject matter falling outside the definition of “invention”, thus non-compliant with section 2 of the *Patent Act*.

[82] 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 11<sup>th</sup> day of May, 2020.