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Commissioner's Decision # 1656
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TOPIC: O00 Obviousness
B00 Claims - Ambiguity or Indefiniteness (incomplete)
J00 Subject Matter of Applications - Meaning of Art
J10 Subject Matter of Applications - Computer Programs

SUJET: O00 Évidence
B00 Revendications - Caractère ambigu ou indéfini
(incomplet)
J00 Objet des demandes - Signification de la technique
J10 Objet des demandes - Programmes d'ordinateur

Application No. 2,634,266

Demande n° 2 634 266

IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application number 2,634,266, having been rejected under subsection 30(3) of the *Patent Rules* (SOR/96–423) as they read immediately before October 30, 2019, has consequently been reviewed in accordance with paragraph 199(3)(c) of the *Patent Rules* (SOR/2019–251). The recommendation of the Patent Appeal Board and the decision of the Commissioner are to refuse the application unless necessary amendments are made.

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INTRODUCTION

- [1] This recommendation concerns the review of rejected Canadian patent application number 2,634,266 which is entitled “ELECTRONIC QUANTITY PURCHASING SYSTEM” and is owned by Mr. Rodney Senior (the Applicant).
- [2] A review of the rejected application has been conducted by the Patent Appeal Board (the Board) pursuant to paragraph 199(3)(c) of the *Patent Rules* (SOR/2019-251). As explained in more detail below, the Board’s recommendation to the Commissioner of Patents is to refuse the application unless necessary amendments are made.

BACKGROUND

The application

- [3] The application was filed on June 6, 2008, and was laid open to public inspection on December 6, 2008.
- [4] The application relates generally to a purchasing system that allows a user to purchase a quantity of motor fuel at a locked-in price in a purchase zone and redeem the motor fuel in whole or in part at a later time in a redemption zone. It also allows at least a portion of the balance of the commodity to be converted from the purchase zone to another zone for redemption.
- [5] The application has 7 claims on file (claims on file), which were received at the Patent Office on March 8, 2016.

Prosecution history

- [6] On July 24, 2018, a Final Action was issued pursuant to subsection 30(4) of the *Patent Rules* (SOR/96–423) as they read immediately before October 30, 2019. It identified the following defects in the application:
- claims 1-7 on file do not comply with section 2 of the *Patent Act*, and
 - claims 1-7 on file do not comply with section 28.3 of the *Patent Act*.

- [7] In a response to the Final Action dated January 23, 2020, the Applicant submitted arguments that the claims on file are directed to patentable subject matter and would not have been obvious.
- [8] As the Examiner still considered the application not to comply with the *Patent Act*, pursuant to paragraph 199(3)(c) of the *Patent Rules*, the application was forwarded to the Board for review on May 15, 2020 along with an explanation outlined in a Summary of Reasons.
- [9] In a letter dated May 22, 2020, the Board forwarded to the Applicant a copy of the Summary of Reasons along with a letter acknowledging the rejection and requested an indication of the Applicant's continued interest in having the application reviewed.
- [10] In a response dated August 18, 2020, the Applicant indicated continued interest in having the application reviewed.
- [11] A Panel of the Board, comprised of the undersigned members, was formed to review the instant application under paragraph 199(3)(c) of the *Patent Rules*.
- [12] In a preliminary review letter (PR letter) dated March 18, 2022, we presented our preliminary analysis with respect to the claims on file. We were of the preliminary view that:
- claims 1-7 on file are directed to non-patentable subject matter and do not comply with section 2 and subsection 27(8) of the *Patent Act*,
 - claims 1-7 on file would have been obvious to a person skilled in the art and do not comply with section 28.3 of the *Patent Act*, and
 - claims 1 and 2 on file do not comply with subsection 27(4) of the *Patent Act*.
- [13] The PR letter also offered the Applicant the opportunities to make written submissions and to attend an oral hearing.

- [14] In a response to the PR letter dated May 13, 2022, the Applicant submitted a set of proposed claims 1-7 (proposed claim set-1) and provided arguments in favour of their patentability.
- [15] A virtual oral hearing was held on May 27, 2022. At the hearing, we noted an indefiniteness defect with respect to the proposed claim set-1. The Applicant submitted a second set of proposed claims 1-7 (proposed claim set-2) along with corresponding proposed amendments to the description on June 10, 2022.

ISSUES

- [16] This review addresses the following issues with respect to the claims on file:
- whether claims 1-7 on file are directed to non-patentable subject matter and are non-compliant with section 2 and subsection 27(8) of the *Patent Act*,
 - whether claims 1-7 on file would have been obvious to a person skilled in the art and non-compliant with section 28.3 of the *Patent Act*, and
 - whether claims 1 and 2 on file are indefinite and non-compliant with subsection 27(4) of the *Patent Act*.
- [17] We also consider whether the latest proposed amendments constitute amendments necessary for compliance with the *Patent Act* and *Patent Rules*, in accordance with subsection 86(11) of the *Patent Rules*.

LEGAL PRINCIPLES AND OFFICE PRACTICE

Purposive construction

- [18] In accordance with *Free World Trust v Électro Santé Inc*, 2000 SCC 66, and *Whirlpool Corp v Camco Inc*, 2000 SCC 67, purposive construction is performed from the point of view of the person skilled in the art in light of the relevant common general knowledge (CGK), considering the whole of the disclosure including the specification and drawings. In addition to interpreting the meaning of the terms of a claim, purposive construction distinguishes the essential

elements of the claim from the non-essential elements. Whether or not an element is essential depends on the intent expressed in or inferred from the claim, and on whether it would have been obvious to the skilled person that a variant has a material effect upon the way the invention works.

- [19] All claimed elements are presumed essential unless it is established otherwise or such presumption is contrary to the claim language.

Obviousness

- [20] Section 28.3 of the *Patent Act* requires claimed subject matter to not be obvious:

The subject-matter defined by a claim in an application for a patent in Canada must be subject-matter that would not have been obvious on the claim date to a person skilled in the art or science to which it pertains, having regard to

(a) information disclosed before the one-year period immediately preceding the filing date or, if the claim date is before that period, before the claim date by the applicant, or by a person who obtained knowledge, directly or indirectly, from the applicant in such a manner that the information became available to the public in Canada or elsewhere; and

(b) information disclosed before the claim date by a person not mentioned in paragraph (a) in such a manner that the information became available to the public in Canada or elsewhere.

- [21] In *Apotex Inc v Sanofi–Synthelabo Canada Inc*, 2008 SCC 61 at paragraph 67, the Supreme Court of Canada stated that it is useful in an obviousness inquiry to follow the following four-step approach:

(1) (a) Identify the notional “person skilled in the art”;

(1) (b) Identify the relevant common general knowledge of that person;

(2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it;

(3) Identify what, if any, differences exist between the matter cited as forming part of the “state of the art” and the inventive concept of the claim or the claim as construed;

(4) Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?

Patentable subject matter

[22] 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.

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

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

[24] In *Canada (Attorney General) v Amazon.com Inc*, 2011 FCA 328 [*Amazon*], at paragraph 66, the court concluded that “because a patent cannot be granted for an abstract idea, it is implicit in the definition of “invention” that patentable subject matter must be something with physical existence, or something that manifests a discernible effect or change.” The court further noted at paragraph 69 that the “physicality requirement” cannot be met merely by the fact that the claimed invention has a practical application.

[25] Furthermore, in the recently released *Canada (Attorney General) v. Benjamin Moore & Co.*, 2023 FCA 168, the Court concluded that the test ordered by the Federal Court for the assessment of patentable subject matter was not supported in Canadian case law. The Court indicated at paragraph 79 that the test is “contrary to this Court’s decision in *Amazon*, which is a binding authority on the Federal Court”. The Court also confirmed at paragraphs 89 and 94 that the requirement set out in paragraph 66 of *Amazon* is still valid.

Indefiniteness

- [26] Subsection 27(4) of the *Patent Act* requires that a claim distinctly and explicitly define subject-matter:

The specification must end with a claim or claims defining distinctly and in explicit terms the subject-matter of the invention for which an exclusive privilege or property is claimed.

- [27] In *Minerals Separation North American Corp v Noranda Mines Ltd*, [1947] Ex CR 306, at page 352, the Court emphasized both the obligation of an applicant to make clear in the claims the ambit of the monopoly sought and the requirement that the terms used in the claims be clear and precise:

By his claims the inventor puts fences around the fields of his monopoly and warns the public against trespassing on his property. His fences must be clearly placed in order to give the necessary warning and he must not fence in any property that is not his own. The terms of a claim must be free from avoidable ambiguity or obscurity and must not be flexible; they must be clear and precise so that the public will be able to know not only where it must not trespass but also where it may safely go.

ANALYSIS

Purposive construction

The person skilled in the art and their common general knowledge

- [28] The PR letter provided our preliminary characterization of the skilled person and their relevant CGK.

- [29] The PR letter, at page 7, stated:

The [Final Action] on page 2 identified the person skilled in the art as “a team of business analysts, and computer programmers”.

In the [response to the Final Action] on page 4, the Applicant argued that the person skilled in the art would also include “fuel marketing entities that can utilize the invention to sell their products and prices to retail customers at a locked-in price”.

We preliminarily agree with the Applicant that the skilled person or team would include fuel marketing entities in addition to business analysts and computer programmers.

[30] The Applicant did not dispute the above characterization in their response to the PR letter or at the hearing. Therefore, we adopt the same characterization in the analysis below.

[31] The PR letter, at pages 7-8, characterized the relevant CGK as the following:

- Knowledge of commodities' market particularly fuels such as diesel and gasoline, including current prices and pricing trends,
- Knowledge of various factors impacting the price of fuel such as crude oil prices, production and transportation costs as well as various governmental taxes and regulations,
- Knowledge of various jurisdictional regulation of gasoline prices such as setting a fixed price or a minimum and/or a maximum price limit,
- Various fuel marketing systems and methods to encourage consumers to purchase fuel from a particular merchant,
- Design, implementation and operation of computer systems, networks and software, including:
 - general purpose and special purpose computers, computing devices, input and output devices, databases, processors and user interfaces,
 - computer network and internet technologies and protocols, as well as standard networking architectures including web servers,
 - conventional computer hardware and programming techniques enabling electronic commerce and transactions, and
 - common computing equipment hardware such as point-of-sale terminals allowing scanning of user cards, as well as automated consumer banking or teller machines.

[32] The Applicant did not dispute the above characterization in their response to the PR letter or at the hearing. Therefore, we adopt the same characterization in the analysis below.

The essential elements

[33] The instant application contains 7 claims on file, including independent claim 1 which reads:

A computer-based system comprising:

a database computer which stores in memory executable by a computer a database including a prepaid account with a balance denominated in quantity units of motor fuel purchased in a purchase zone at a posted current-time locked-in purchase zone price, wherein the purchase zone is also a redemption zone; and

a web server computer for interacting with the database computer and also for interacting with at least one client computer configured to be used by a purchaser of a quantity of units of motor fuel and at least one retail service station with electronic point of sale equipment that allows the original purchaser or an authorized person, as a user, to:

identify at least one other zone of redemption different than that of the purchase zone;

select at least a portion of the balance of a quantity of units of motor fuel in the purchase zone account to be converted to a quantity of units of motor fuel available for redemption in the at least one other zone of redemption, the at least one other zone of redemption having another redemption zone price;

convert the selected quantity of units of motor fuel into a different quantity of units of motor fuel available for redemption in the at least one other zone of redemption, wherein the user manually employs a designated actuation control to instruct the system to compute the equivalent quantity of units of motor fuel available for redemption in the at least one other zone of redemption, the system multiplying the selected quantity of units of motor fuel in the purchase zone account balance by the quotient of the purchase zone price divided by the

another redemption zone price, and wherein the system is configured to credit the at least one other zone of redemption quantity balance with the said converted quantity of units of motor fuel.

present a unique identifier of a user at a retail service station located in the at least one other zone of redemption, the retail service station point of sale equipment capturing the unique identifier number and connecting to the system by Internet or electronic data transfer communication, the system validating the unique user identifier against a corresponding preregistered account in the database and capturing the zone of redemption in which the retail service station is located;

access a quantity balance of units of motor fuel available for redemption in the at least one other zone of redemption, wherein the system is configured to authorize the user to redeem at least a portion of the quantity balance of units of motor fuel available for redemption in the at least one other zone of redemption; and

redeem at least a portion of a quantity of units of motor fuel from a quantity balance available for redemption in the at least one other zone of redemption for a quantity of units of physical motor fuel at a service station located in the at least one other zone of redemption, wherein the system is configured to subtract from the user's quantity account balance for the quantity of units of physical motor fuel that are redeemed.

[34] Dependent claim 2 additionally recites automatic conversion of a balance from the purchase zone to a redemption zone. Dependent claims 3-7 recite further limitations on the claimed redemption zone, user and motor fuel.

[35] The PR letter, at page 9, set out our preliminary view of the essential elements of the claims on file:

With respect to the claims on file, the person skilled in the art would understand that there is no use of language in any of the claims indicating that the elements in each claim are optional, a preferred embodiment or non-essential. While independent claim 1 recites alternatives, namely “the original purchaser or an authorized person” and “by Internet or electronic data transfer communication”, each alternative is an

independent embodiment of the claim, wherein only the selected alternative is essential. Similarly, dependent claims 4, 5 and 7 recite a list of alternatives which are independent embodiments of the claim for each alternative, wherein only that alternative is essential.

Therefore, in our preliminary view, all the elements of the claims on file are presumed to be essential.

- [36] As the Applicant did not dispute the above preliminary view in their response to the PR letter or at the hearing, we adopt the above position in this review.

Meaning of terms

- [37] Purposive construction is also used to construe the meaning of claim terms as understood by the person skilled in the art.

- [38] The PR letter set out our preliminary view of the meaning of redeeming fuel recited in the claims on file.

- [39] The PR letter, at page 10, stated:

Claim 1 on file recites the expression “redeem at least a portion of a quantity of units of motor fuel from a quantity balance available...for a quantity of units of physical motor fuel at a service station”. Claim 3 on file recites a similar feature. Based on the instant specification, it is our preliminary view that the person skilled in the art would construe redeeming a quantity of motor fuel to mean the change of ownership of the quantity of motor fuel.

- [40] In their response to the PR letter, the Applicant submitted arguments in favour of physicality of the expression redeeming fuel, focusing on the subject of change of ownership of fuel as a legal matter which depends on contractual terms and conditions between parties. The Applicant further submitted their view that “redeeming a quantity of motor fuel would be construed by a person skilled in the art to mean dispensing a quantity of physical fuel at a gas station, thereby drawing down on the user’s quantity account balance as disclosed.”

[41] We respectfully disagree. The instant description only mentions pumping of fuel once in paragraph [0026] where it recites “the truck driver pumps diesel”. The description does not disclose details with respect to the retail service stations including point of sale equipment or pumps. Therefore, in our view, the skilled person, based on the disclosure of the instant application, would not construe the expression redeeming fuel to mean pumping of fuel at a service station.

[42] In their response to the PR letter, the Applicant also submitted proposed amendments, specifying in proposed claims 1-3 that redeeming of fuel is by pumping action.

Obviousness

(1) Identify the notional “person skilled in the art” and their relevant CGK

[43] The person skilled in the art and their relevant CGK have been identified above under purposive construction.

(2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it

[44] In the PR letter, we considered the combination of the essential elements of the claims to represent their inventive concepts. As the Applicant did not dispute this characterization, we adopt it in this review.

(3) Identify what, if any, differences exist between the matter cited as forming part of the “state of the art” and the inventive concept of the claim or the claim as construed

[45] The Final Action referenced prior art documents D1 and D4. In addition, during our preliminary review, we found relevant prior art document D5:

- D1: CA 2 340 966 A1 15 September 2001 Senior
- D4: US 7,219,832 B2 22 May 2007 Fillinger et al.

- [46] D1 discloses an electronic quantity purchasing system allowing users to pre-purchase quantities of commodities, particularly fuel, at a locked-in price and redeem at a later date. D1 has the same applicant as the instant application.
- [47] D4 discloses a system and method for facilitating foreign currency withdrawals by account holders using Automated Teller Machines (ATMs).
- [48] D5 discloses a system and method for cross-selling products at a fuel service station, where the customer is provided the opportunity to purchase fuel at the current price for redemption at a future date.
- [49] In our view, as in the PR letter, D1 is the closest prior art. It discloses an electronic quantity purchasing system, which is a host computer system that a user may access to pre-purchase quantities of goods and later redeem for the actual product at a point of distribution.
- [50] The PR letter, at pages 13-15, set out our preliminary view on the differences between the disclosure of D1 and the inventive concept of independent claim 1 on file as the following:

With respect to the independent claim 1, in our preliminary view, D1 discloses the following:

a database computer which stores in memory executable by a computer a database including a prepaid account with a balance denominated in quantity units of motor fuel purchased in a purchase zone at a posted current-time locked-in purchase zone price, wherein the purchase zone is also a redemption zone [D1: p. 9 lines 1-20, p. 13 line 16 – p. 14 line 6; Figs 1-3]; and

a web server computer for interacting with the database computer and also for interacting with at least one client computer configured to be used by a purchaser of a quantity of units of motor fuel and at least one retail service station with electronic point of sale equipment [D1: p. 10 lines 5-15, p. 11 line 9 – p. 12 line 6; Figs 1-2] that allows the original purchaser or an authorized person, as a user, to:

manually employ a designated actuation control to instruct the system [D1: p. 12 lines 11-12; Figs 5-11] to:

identify a purchase zone and purchase discrete quantity units of a commodity at the posted price which is credited to the corresponding zone balance in the user's account [D1: p. 13 line 16 – p. 14 line 5, p. 19 lines 1-2; Fig 5],

transfer some or all of the quantity units of commodity to another user [D1: p. 14 lines 12-13, p. 19 line 6; Fig 6],

view a balance of the quantity units of pre-purchased fuels in different zones in the user's account [D1: p. 13 lines 1-2, p. 19 lines 7-8, Fig. 7],

convert at least a portion of the account balance from one zone to another, and debit from and credit the balance in the corresponding zone balance [D1: Fig 7 shows a “convert zone” function on the user interface, it is implicit that the balance in the corresponding zones would be appropriately debited/credited once a conversion is executed],

present a unique identifier of a user at a retail service station located in a zone of redemption, the retail service station point of sale equipment capturing the unique identifier number and connecting to the system by Internet or electronic data transfer communication, the system validating the unique user identifier against a corresponding preregistered account in the database [D1: p. 14 lines 7-10; Fig 2: “Swipe Card Scan Keytag”, “Redeem for Real Commodity”, “Verify Account Balance”] and capturing the zone of redemption in which the retail service station is located [D1: Fig 11 shows that transaction items include the location of the retail service station where fuel was redeemed. Also, for the sake of completeness, we preliminarily note that Fig 2 shows that redeeming for real commodity comprises the steps of verifying account balance, instantly debiting account, and returning authorisation/transaction code to the point of sale terminal. Since Fig 7 discloses that the user account includes fuels in various redemption zones, our preliminary view is that it is implicit that the location of the

retail service station is captured when fuel is redeemed in order to ensure that the redemption quantity is debited from the correct zone],

access a quantity balance of units of motor fuel available for redemption in the zone of redemption, wherein the system is configured to authorize the user to redeem at least a portion of the quantity balance of units of motor fuel available for redemption in the zone of redemption [D1: p. 14 line 18 – p. 15 line 2; p. 19 line 3; Fig 2 shows that redeeming for real commodity comprises the steps of verifying account balance, instantly debiting account, and returning authorisation/transaction code to the point of sale terminal; Fig 11 shows that transaction items include the redemption zone and the retail service station's location], and

redeem at least a portion of a quantity of units of motor fuel from a quantity balance available for redemption in the zone of redemption for a quantity of units of physical motor fuel at a service station located in the zone of redemption, wherein the system is configured to subtract from the user's quantity account balance for the quantity of units of physical motor fuel that are redeemed [D1: p. 14 line 18 – p. 15 line 2; Fig 2: "Instantly Debit Account"].

[51] In our preliminary view, D1 does not explicitly disclose:

- (1) the zone of redemption having another redemption zone price, and
- (2) convert a selected quantity of units of motor fuel into a different quantity of units of motor fuel available for redemption in the zone of redemption, wherein the system computes the equivalent quantity of units of motor fuel available for redemption in the zone of redemption by multiplying the selected quantity of units of motor fuel in the purchase zone account balance by the quotient of the purchase zone price divided by the another redemption zone price.

The [Final Action] stated on page 10 that "D1 does not explicitly disclose the claimed particulars of converting selected quantity units from one zone to another by multiplying the quantity units of motor fuel selected from the account balance in the purchase zone by a quotient of the purchase zone price divided by the another redemption zone price, or the actual redemption of converted quantity units in a different zone from where said original quantity units were purchased."

As mentioned above, D1 discloses that the user is able to purchase a discrete quantity of fuel for a selected zone [D1: Fig 5]. Figures 5-11 in D1 show a “CONVERT Zone” functionality. Figure 5 recites that “Each province has several price zones” and figure 7 shows a user’s balance including quantities of fuel for each zone such as Ontario East and Ontario South-West. Therefore, although D1 does not appear to provide explicit details regarding the convert zone functionality, it is our preliminary view that a skilled person would have understood that D1’s convert zone functionality provides the user with the ability to convert a certain quantity of fuel from one zone to another in their account. Additionally, given that D1 discloses debiting and crediting the appropriate balances in the user’s account according to purchase requests and fuel redemption, it is our preliminary view that the skilled person would have understood that the convert zone functionality in D1 adjusts the user’s balance of fuel, in the form of debiting from and crediting the corresponding zones, in accordance with the user’s convert zone request.

Furthermore, figure 11 in D1 discloses a user’s transaction history for a selected zone and fuel. It is therefore our preliminary view that D1 allows the user to redeem specific type of fuel in various redemption zones in order to draw from the corresponding zone balance in their account.

The dependent claims will be addressed in step (4) below.

(4) Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?

[52] In the PR letter, at pages 16-18, we set out our preliminary view that the claims on file would have been obvious to the skilled person:

The [Final Action] indicated that the identified differences would have been obvious in view of D4 and the CGK. In the [response to the Final Action] on pages 22-25, the Applicant disputed that the skilled person would have foreseen D4, which is in the field of facilitating foreign currency withdrawals.

We preliminarily consider prior art document D5, which is in the same field as D1, rendering the Applicant’s arguments with respect to D4 moot.

D5 discloses a system and method for providing customers the option to purchase fuel at the current price for redemption at a future date. It discloses informing a customer that a future purchase of fuel can be currently made at today's price, recording the customer's order for future fuel, accepting the customer's payment for the future fuel, encoding the customer's purchase of future fuel on a token, and providing the customer with the encoded token for redemption at a future date [D5: col. 1 lines 60-66; Fig 4].

Regarding difference (1), D5 discloses that the customer can redeem fuel at any merchant location in a participating network of merchants, including in other regional zones with different taxes [D5: col. 5 lines 23-28].

Therefore in our preliminary view, difference (1) would have been obvious to a skilled person having regard to D1 in view of D5 and the CGK.

Regarding difference (2), D5 discloses that if the customer redeems fuel in a location where the total taxes are greater than the location where the fuel was purchased, "the customer can be informed at the time of purchase that the quoted price includes taxes in effect at the site (and time) where the fuel was purchased, but that higher taxes at other locations or later times could result in a higher PPU [price-per-unit] when redeemed" [D5: col. 5 lines 23-36]. D5 further discloses that, if the scanned token reveals a future fuel sale, "the system cross-checks tax fields in its database and determines any difference between the total taxes at the site where the fuel was purchased and the site where the token is being redeemed. If there is any difference, the PPU is adjusted for the difference" [D5: col. 7 lines 16-25]. Given that D5 discloses future purchases in discrete quantities of fuel (gallons, liters, etc.), it is our preliminary view that adjusting the PPU to account for difference in taxes is equivalent to adjusting the available quantity of pre-purchased fuel.

D5 discloses making adjustments to the future purchase amount based on price differential between the purchase zone and the redeeming zone to account for different regional taxes. It does not explicitly disclose the claimed conversion formula comprising multiplying a quantity of fuel in the purchase zone account balance by the quotient of the purchase zone price divided by the redemption zone price. However, in our preliminary view, the claimed quantity conversion formula based on the price differential would have been obvious to a person skilled in the art having regard to D5 and the CGK.

In light of the above, it is our preliminary view that it would have been obvious to a person skilled in the art to extend the teachings of D1 in view of D5 and the CGK such that the user would be able to convert a selected quantity of pre-purchased fuel in the purchase zone to a different quantity in a redemption zone based on the corresponding zone prices.

Dependent claim 2 recites that the user is allowed to access a quantity balance of units available for redemption at a retail service station located in a redemption zone, wherein the system is configured to automatically convert a purchase zone quantity balance to a different quantity balance available in the redemption zone. As previously mentioned, D5 discloses that, if a scanned token reveals a future fuel sale, the system adjusts the PPU and therefore the available quantity of fuel in the redemption zone accordingly [D5: col. 7 lines 16-25]. D5 also discloses that the customer may redeem all or part of the pre-purchased amount [D5: col. 7 lines 25-27]. In our preliminary view, D5 discloses that when a customer attempts to redeem fuel at a redemption zone, the system automatically performs a conversion to account for differences in taxes, and therefore prices, between the purchase zone and redemption zone. Therefore, in our preliminary view, the above feature would have been an obvious to a skilled person in view of the disclosure of D5 and the CGK.

The additional limitations of claim 2, namely the system authorizing the user to redeem a portion of the converted purchase zone quantity and subtracting from the user's account balance, were previously addressed in our analysis of claim 1. In our preliminary view, they would have been obvious to the skilled person in view of D1, D5 and the CGK.

Dependent claims 3-7 recite further details on the claimed invention including the redemption zone being different than the purchase zone, the unique identifier being presented by the purchaser or one or more authorized people as well as further limitations on the claimed motor fuel. It is our preliminary view that these claimed features were part of the CGK of the skilled person and would not have constituted an inventive step.

In conclusion, it is our preliminary view that claims 1-7 on file would have been obvious to the person skilled in the art in view of prior art documents D1 and D5 and

the relevant CGK. Consequently, in our preliminary view, claims 1-7 on file do not comply with section 28.3 of the *Patent Act*.

[53] In their response to the PR letter, at pages 15-20, the Applicant submitted the following arguments:

PR considers D1 to be the closest prior art to the instant disclosure [PR page 13, line 1]. PAB is asked to appreciate that the only reference in D1 to Price Zone or Zone Conversion are labels on some of the drawings for future reference [Figs. 5 – 11]. Applicant does not intend to teach or enable the functions of Price Zone and Price Zone Conversion in D1.

[portion of original text omitted]

Applicant submits that the Price Zone structure disclosed in the instant application Sections [90 – 92] is incongruent with D5 which concerns itself only to a situation where “total taxes are greater at the redeeming site than the taxes at the site where the fuel was purchased” (D5: col. 5, lines 28 – 30). Applicant elucidates that taxes are but a small subset of the entire component structure of fuel price when describing Price Zones in the instant disclosure Sections [90 – 104]. Applicant submits, therefore, that D5 “if total taxes are greater” is not a comparable reference to the instant Price Zone component structure that is disclosed in instant sections [90 – 92].

Referring to [PR page 16, line 20], D5 discloses that “higher taxes at other locations could result in a higher PPU when redeemed” [D5: col. 5, lines 35 – 36] and that “if there is any difference, the fuel price is adjusted for the difference” (D5: col. 7, line 25). It is evident by these perfunctory remarks that D5 identifies a problem arising with “higher taxes at other locations” but D5 fails to provide evidence of a solution to the cited problem. D5 does not teach how higher taxes are supposed to be applied to the redemption transaction and provides no guidance on how such higher taxes would quantitatively impact the redemption transaction. In contrast, the instant disclosure provides a detailed explanation of Price Zone Conversion, a conversion formula, and worked examples in Sections [93 - 104].

[portion of original text omitted]

Referring to [PR page 17, lines 16 – 18], Applicant respectfully disagrees with PR finding that D5 discloses "the system adjusts the PPU and therefore the available quantity of fuel in the redemption zone accordingly". There is no reference in D5 to adjusting the available quantity of fuel in the redemption zone. Adjusting the PPU does not automatically or necessarily result in the adjustment of the available quantity of fuel. The fact is that D5 is ambiguous whether "higher taxes at other locations or at later times could result in a higher PPU when redeemed or whether the redeeming merchant at a higher tax location may have to absorb the difference by reducing his profit margin" (DS: col. 5, lines 30 - 36). The lack of clarity in D5 on this subject and absent a formula or calculation of any kind, one cannot surmise that the PPU is adjusted or whether, or how, the available quantity of fuel in the redemption zone is automatically adjusted accordingly.

- [54] At the oral hearing, the Applicant submitted further clarifications with respect to the claimed features of available balance as well as conversion, both manual and automatic, of a quantity of fuel.
- [55] The Applicant also indicated that there was no intention to describe or enable the price zone conversion feature in D1, as at the time of D1 they had not figured out the conversion feature. The Applicant also argued that the person skilled would not have incorporated D5 into the system in D1 to arrive at the claimed subject matter.
- [56] The Applicant submitted that D5 simply discloses higher taxes at the redeeming location compared to the purchase location would result in a higher PPU. The Applicant also submitted that D5 is only concerned with tax differences, and that not only are taxes a small component of the differences in fuel prices in different zones, but that unlike the disclosure in D5, taxes are complicated as there are multiple federal and regional tax components as well as different calculation methods which may be based on a variety of factors such as value, fuel volume, or inflation rate. In brief, the applicant argued that D5's disclosure would not have provided enough details to enable the person skilled in the art to perform the claimed conversion features in the instant application.
- [57] We found the Applicant's arguments in their written submissions and at the oral hearing with respect to the details of the claimed conversion compared to the

general statements in D5 persuasive. Therefore, we have reasonable ground to believe that the person skilled in the art would not have come directly and without difficulty to the subject matter of the claims on file having regard to D1 in view of D5 and the relevant CGK.

- [58] In light of the above, we conclude that claims 1-7 on file would not have been obvious to the skilled person and do comply with section 28.3 of the *Patent Act*.

Patentable subject matter

- [59] In the PR letter, we set out our preliminary view that the claims on file are directed to non-patentable subject matter, falling outside the definition of invention in section 2 of the *Patent Act* and prohibited under subsection 27(8) of the *Patent Act*.

- [60] In their response to the PR letter, the Applicant submitted arguments in favour of patentability of the claims on file as well as a set of proposed claims. The Applicant argued that the invention has a practical application and that the claimed subject matter includes physical aspects and components contributing to the physicality of the invention.

- [61] We respectfully disagree. As explained in *Amazon* at paragraph 69:

However, if it is meant to suggest that this “physicality requirement” can be met merely by the fact that the claimed invention has a practical application, then I do not agree. The issue, in my view, is similar to the issue raised in the context of the patentability of business methods in that it requires consideration of *Schlumberger* [*Schlumberger Canada Ltd. v. Commissioner of Patents*, [1982] 1 F.C. 845 (CA)]. The claims in *Schlumberger* were not saved by the fact that they contemplated the use of a physical tool, a computer, to give the novel mathematical formula a practical application.

- [62] In our view, the claims on file are similar to the case in *Schlumberger* which the court in *Amazon* described as “an unsuccessful attempt to patent a method of collecting, recording, and analyzing seismic data using a computer programmed according to a mathematical formula. That use of the computer was a practical

application, and the resulting information was useful. But the patent application failed for want of patentable subject matter because the Court concluded that the only novel aspect of the claimed invention was the mathematical formula, which, as a “mere scientific or abstract theorem”, cannot be the subject of a patent because of the prohibition in subsection 27(8).”

[63] In our view, there is no suggestion in the specification that the claimed computer elements, namely the database, web server, client computer or point of sale equipment, represent anything other than typical components of a computer, or that they perform operations beyond those of a computer as was the case in *Schlumberger*. Additionally, as explained in the meaning of terms section above as well as in the PR letter, it is our view that the skilled person would not construe the expression “redeem...a quantity of units of motor fuel” to include a physical step such as pumping fuel at a service station. We therefore have reasonable ground to believe that the claims on file do not meet the physicality requirement as described in *Amazon*.

[64] In light of the above, it is our view that claims on file are directed to non-patentable subject matter and do not comply with section 2 and subsection 27(8) of the *Patent Act*.

Indefiniteness

[65] In the PR letter, we set out our preliminary view that claims 1 and 2 on file are indefinite and do not comply with subsection 27(4) of the *Patent Act*.

[66] The PR letter, at pages 18-19, stated:

In our preliminary view, the following indefiniteness defects are present in the claims on file.

Claim 1 appears to have an extra period on line 23, thereby in our preliminary view causing a lack of clarity.

Claim 1 on line 36 recites “a service station”, which is defined with an indefinite article, thereby in our preliminary view causing a lack of clarity as to whether or not it

is intended to refer to the “retail service station” as was previously defined in claim 1 on line 24. In our preliminary view, a similar issue exists for the term “a retail service station” in claim 2 on lines 2-3.

Claim 2 recites “access a quantity balance of units of motor fuel available for redemption at a retail service station located in the at least one other zone of redemption”. Given that claim 1 recites a manual conversion step where the user “select[s] a portion of the balance of a quantity of units of motor fuel in the purchase zone account to be converted to a quantity of units of motor fuel available for redemption in the at least one other zone of redemption”, in our preliminary view it is not clear whether the aforementioned expression in claim 2 refers to the purchase zone quantity balance or redemption zone quantity balance.

Furthermore, in our preliminary view, it is not clear what prompts the automatic conversion step in claim 2. It appears that the claimed step of accessing a quantity of balance of units of fuel causes the automatic conversion step to get executed. However, the description in paragraph [0100] discloses that “the Zone Conversion function may automatically perform a zone conversion between zones if a user redeems in a different zone to the zone in which, or for which, the initial purchase was made”.

Finally, both claims 1 and 2 recite the expression “at least one other zone of redemption”, indicating more than one zone of redemption may be possible. However, claim 2 indicates that the system automatically converts “a purchase zone quantity balance to a different quantity balance available in the at least one other zone of redemption”. It is not clear how the system would automatically convert a purchase zone quantity balance to more than one redemption zone balance.

In light of the above, it is our preliminary view that the scope of claim 2 is not defined in a clear and distinct manner such that the skilled person will be able to determine whether what he proposes to do will infringe or not, consistent with the quotation from *Minerals Separation* cited earlier.

Therefore, it is our preliminary view that claims 1 and 2 on file are indefinite and do not comply with subsection 27(4) of the *Patent Act*.

[67] The Applicant did not dispute the above in their response to the PR letter, instead submitted proposed amendments to claims 1 and 2 on file to overcome these defects. We therefore conclude that claims 1 and 2 on file are indefinite and do not comply with subsection 27(4) of the *Patent Act*.

Proposed amendments

[68] As previously stated, in their response to the PR letter, the Applicant submitted proposed claim set-1 adding further limitations to claims 1-3 on file. Following the oral hearing, the Applicant submitted proposed claim set-2, in order to remedy an indefiniteness defect in proposed claim set-1, along with proposed amendments to the description corresponding to the proposed claims. Below, we consider the latest set of proposed claims, namely proposed claims set-2.

[69] Proposed claim set-2 contains 7 claims, including independent claim 1, which reads:

1. A computer-based system comprising:

a database computer which stores in memory executable by a computer a database including a prepaid account with a balance denominated in quantity units of motor fuel purchased in a purchase zone at a posted current-time locked-in purchase zone price, wherein the purchase zone is also a redemption zone; and

a web server computer for interacting with the database computer and also for interacting with at least one client computer configured to be used by a purchaser of a quantity of units of motor fuel and at least one retail service station with electronic point of sale equipment that allows the original purchaser or an authorized person, as a user, to:

identify at least one other zone of redemption different than that of the purchase zone;

select at least a portion of the balance of a quantity of units of motor fuel in the purchase zone account to be converted to a quantity of units of motor fuel available for redemption in the at least one other zone of redemption, the at least one other zone of redemption having another redemption zone price;

convert the selected quantity of units of motor fuel into a different quantity of units of motor fuel available for redemption in the at least one other zone of redemption, wherein the user manually employs a designated actuation control to instruct the system to compute the equivalent quantity of units of motor fuel available for redemption in the at least one other zone of redemption, the system multiplying the selected quantity of units of motor fuel in the purchase zone account balance by the quotient of the purchase zone price divided by the another redemption zone price, and wherein the system is configured to credit the at least one other zone of redemption quantity balance with the said converted quantity of units of motor fuel;

present a unique identifier of a user at a retail service station located in the at least one other zone of redemption, the retail service station point of sale equipment capturing the unique identifier number and connecting to the system by Internet or electronic data transfer communication, the system validating the unique user identifier against a corresponding preregistered account in the database and capturing the zone of redemption in which the retail service station is located;

access a quantity balance of units of motor fuel available for redemption in the at least one other zone of redemption, wherein the system is configured to authorize the user to redeem at least a portion of the quantity balance of units of motor fuel available for redemption in the at least one other zone of redemption; and

redeem, by pumping action, at least a portion of a quantity of units of physical motor fuel at the retail service station from a quantity balance available for redemption in the at least one other zone of redemption for a quantity of units of physical motor fuel at the retail service station located in the at least one other zone of redemption, wherein the system is configured to convert the quantity of units of motor fuel dispensed in the redemption zone to an equivalent quantity of units in the purchase zone by multiplying the said quantity of units dispensed by the quotient of the redemption zone price divided by the purchase zone price, and subtract from the user's quantity account balance for the converted quantity of units of physical motor fuel that are redeemed.

- [70] Proposed dependent claims recite further limitations regarding the claimed fuel purchasing system.
- [71] With respect to the proposed claims, the person skilled in the art would understand that there is no use of language in any of the claims indicating that the elements in each claim are optional, a preferred embodiment or non-essential. While proposed claim 1 recites alternatives, namely “the original purchaser or an authorized person” and “by Internet or electronic data transfer communication”, each alternative is an independent embodiment of the claim, wherein only the selected alternative is essential. Similarly, proposed dependent claims 4, 5 and 7 recite a list of alternatives which are independent embodiments of the claim for each alternative, wherein only that alternative is essential.
- [72] Therefore, in our view, all the elements of the proposed claims are presumed to be essential.

Obviousness

- [73] As previously mentioned, proposed independent claim 1 includes additional limitations compared to independent claim 1 on file. Given our view that the claims on file would not have been obvious to a person skilled in the art, it is our view that claims 1-7 in proposed claim set-2 would not have been obvious and would comply with section 28.3 of the *Patent Act*.

Patentable subject matter

- [74] In their response to the PR letter, the Applicant submitted proposed claims specifying that the claimed redeeming feature is by way of pumping fuel at the service station.
- [75] We have reasonable ground to believe that proposed claim set-2 would meet the physicality requirement as described in *Amazon*. It is therefore our view that the claims in proposed claims set-2 would be directed to patentable subject matter, and would comply with section 2 and subsection 27(8) of the *Patent Act*.

Indefiniteness

[76] In our view, the claims in proposed claim set-2 would overcome the indefiniteness defects identified in the PR letter with respect to the claims on file. It is therefore our view that proposed claim set-2 would comply with subsection 27(4) of the *Patent Act*.

Conclusion regarding the proposed amendments

[77] In light of the above, we conclude that, in accordance with subsection 86(11) of the *Patent Rules*, proposed claim set-2 is necessary for compliance of the application with the *Patent Act* and *Patent Rules*.

CONCLUSIONS

[78] We are of the view that:

- claims 1-7 on file are directed to non-patentable subject matter, and do not comply with section 2 and subsection 27(8) of the *Patent Act*,
- claims 1-7 on file would not have been obvious to a person skilled in the art, and comply with section 28.3 of the *Patent Act*,
- claims 1 and 2 on file are indefinite and non-compliant with subsection 27(4) of the *Patent Act*, and
- proposed claim set-2 would comply with the *Patent Act* and *Patent Rules*, and is considered a necessary amendment under subsection 86(11) of the *Patent Rules*.

RECOMMENDATION OF THE BOARD

[79] In view of the above, we recommend that the application be notified, in accordance with subsection 86(11) of the *Patent Rules*, that the following amendments are necessary for compliance of the application with the *Patent Act* and *Patent Rules*:

- The deletion of claims 1-7 on file, and

- The insertion of claims 1-7 in proposed claim set-2 submitted on June 10, 2022.

Mehdi Ghayour

Howard Sandler

Christian Workman

Member

Member

Member

DECISION OF THE COMMISSIONER

[80] I concur with the conclusions and recommendation of the Patent Appeal Board. In accordance with subsection 86(11) of the *Patent Rules*, I hereby notify the Applicant that the following amendments, and only the following amendments, must be made within three (3) months of the date of this decision, failing which I intend to refuse the application:

- The deletion of claims 1-7 on file,
- The insertion of claims 1-7 in proposed claim set-2 submitted on June 10, 2022.

Konstantinos Georgaras

Commissioner of Patents

Dated at Gatineau, Quebec

this 23rd day of August, 2023