TOPICS: J-00 Meaning of Art

J-50 Mere plan

SUJETS: J-00 Signification de la technique

J-50 Simple plan

IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application number 2,798,566 having been rejected under subsection 30(3) of the *Patent Rules* (SOR/96-423), has consequently been reviewed in accordance with Paragraph 30(6)(*c*) of the *Patent Rules*. The recommendation of the Board and the decision of the Commissioner is to refuse the application.

<u>Agent for the Applicant</u>

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INTRODUCTION

[1] This recommendation deals with a review of the rejection under subsection 30(3) of the *Patent Rules* of patent application number 2,798,566 entitled "IDENTIFIED CUSTOMER REPORTING." The application has a filing date of December 13, 2012. The Applicant is TARGET BRANDS, INC.

[2] The present application relates to the identification of the number of unique customers that have made purchases at a retail store, and the tracking of trends in year-over-year increases of these customers, so as to indicate potential for increased future revenues. The application addresses problems in accurately identifying the number of unique customers caused by certain factors that degrade the quality of the data being analyzed.

[3] The invention seeks to alleviate these problems by providing a first set of customer transaction data for identified customers from both an earlier and later time period, which is then adjusted to remove one or more customer transactions that occurred during the earlier time period so as to compensate for the delay (or time lag) in identifying customers for transactions that occurred during the earlier period. This adjusted data becomes a second customer data set. This second data set is further adjusted using a customer identification weighting factor to account for the bias in identifying particular customers based on one or more characteristics of their payment accounts. This allows for a weighted total number of customer transactions to be associated with the identified customers, which provides a more accurate indication of the actual unique customers visiting the retail store. An output report is produced to provide a representation of this second data set.

PROCEDURAL HISTORY

[4] This application was rejected in a Final Action dated February 28, 2014 on the grounds that claims 1-25 on file do not define statutory subject matter, contrary to the requirements of section 2 of the *Patent Act*. In its response to the Final Action, the Applicant submitted claims 1-25 ("proposed claims") and arguments in favour of their patentability.

[5] The application was forwarded to the Patent Appeal Board on March 12, 2015 with a Summary of Reasons ("SOR") setting out why the Examiner considered the claims on file to be defective. The SOR was forwarded to the Applicant on April 27, 2015.

[6] In a letter dated June 29, 2015, the Applicant provided written submissions in response to the SOR and an indication that it wished to participate in an oral hearing.

[7] The present panel was formed to review the application under paragraph 30(6)(*c*) of the *Patent Rules*. In a letter dated April 21, 2016 ["the Panel Letter"], we set out our preliminary analysis and rationale as to why, based on the record before us, claims 1-25 do not define statutory subject matter as required by section 2 of the *Patent Act*. The Panel Letter also offered the Applicant an opportunity to be heard.

[8] In a letter dated May 20, 2016, the Applicant declined to make further submissions in response to the Panel Letter, and further, declined the offer to attend an oral hearing.

ISSUE

[9] The only issue before the panel is whether or not claims 1-25 on file define statutory subject matter as required by section 2 of the *Patent Act*.

LEGAL PRINCIPLES

Claim Construction

[10] In accordance with *Free World Trust v Électro Santé Inc*, 2000 SCC 66, essential elements are identified through a purposive construction of the claims done by considering the whole of the disclosure, including the specification and drawings (see also *Whirlpool Corp v Camco Inc*, 2000 SCC 67 at paras. 49(f) and (g) and 52). In accordance with the *Manual of Patent Office Practice* §13.05 [revised June 2015], the first step of purposive claim construction is to identify the person skilled in the art and their relevant common general knowledge. The next step is to identify the problem addressed by the inventors and the solution disclosed in the application. Essential elements can then be identified as those elements of the claims that are required to achieve the disclosed solution.

Statutory Subject Matter

[11] 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.

[12] Following the Federal Court of Appeal decision in *Canada (Attorney General) v Amazon.com, Inc*, 2011 FCA 328 [*Amazon*], the Office released an examination memo PN2013-03 entitled "*Examination Practice Respecting Computer-Implemented Inventions*" that clarified Office examination practice for computer-implemented inventions. This memo was cited in the Panel Letter of April 21, 2016.

[13] As stated in PN 2013-03, 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, fine arts, methods of medical treatment, features lacking in physicality, or claims where the subject matter is a mere idea, scheme, rule or set of rules – "the claim is not compliant with section 2 of the *Patent Act*."

CLAIM CONSTRUCTION

[14] Prior to undertaking an analysis of the issue, the Panel Letter set out a purposive construction of the claims on file.

Person skilled in the art

[15] Although not explicitly identified in the Final Action, the Panel Letter set out that the person skilled in the art is a business and data analyst familiar with computer technology.

Common general knowledge (CGK)

[16] The Panel Letter (page 2) set out the relevant CGK of the person skilled in the art based on a reading of the specification:

> a. Knowledge of computerized business systems: cash registers, Point of Sale (POS) terminals, systems for computerized record keeping, accounting, and

data analysis, etc.;

b. Knowledge of customer tracking for financial and business data analysis, including using customer attributes such as name, account information, purchase history, geographical location, etc.;

c. Knowledge of looking for trends in customers, sales, revenues, and potential markets over a time period and producing reports on those trends for business analysis;

d. Knowledge of general computer system hardware, software, and communication networks, such as servers, processors, storage devices, displays, user interface devices, wired and wireless data networks; and basic software components such as applications, modules, web browsers, operating systems, etc. (for example those components and features generically identified in paragraphs 29-34 and 43-51 of the description), and the generic techniques to implement those computer components (for example, using hardware, or software and firmware programming in DSPs, ASICs, EPROMS, and the like), which are discussed in paragraphs 83-86 of the description.

Although cited as prior art for an obviousness analysis in the Office Action of March 15, 2013, the references of D1 (WO2009158417 - *Levin et al.*) and D2 (US7251625 – *Anglum*) disclose certain background information which also appears to be common general knowledge:

e. Knowledge of tracking historical sales growth using credit card data (D1, page 1); and

f. Knowledge of services provided to retailers which track and identify customers by using credit card transactions at POS terminals (D2, col 2 lines 6-16).

Problem

[17] As we set out in the Panel Letter (page 3), the application addresses the difficulty in accurately identifying the number of unique customers caused by certain factors that degrade the customer data (described as a 'time lag' and a customer identification bias). The problem would appear to the skilled person to be one of obtaining the most accurate data for the trend analysis.

[18] In our view, the skilled person would not consider this to be a computer problem, i.e., not a problem in the computer business systems themselves, or with the manner of how the computer system processes the data flow (i.e., retrieves, removes, determines, associates, multiplies or outputs data). Instead, the skilled person would understand that the problem relates to the accuracy of the data being used in the final report, and not to any limitation of the computer system which may be used to generate the final report.

Solution

[19] The Panel Letter (page 3) set out that the solution to the above problem pertains to improving the otherwise inaccurate data for identifying the unique customers of a retailer, by adjusting the customer identification method in two ways:

    a. A first set of customer transaction data for identified customers from both an earlier and later time period is adjusted to remove one or more customer transactions that occurred during the earlier time period and is associated with a customer identified during that earlier period, so as to compensate for the delay (time lag) in identifying customers for transactions that occurred during the earlier period. This becomes a second customer data set.

    b. The second data set is further adjusted using a customer identification weighting factor to account for the bias in identifying particular customers based on one or more characteristics of their payment accounts. This allows for a weighted total number of customer transactions to be associated with the identified customers, hence more accurately reflecting the actual unique customers. An output report is produced to provide a representation of this second data set.

Meaning of terms used in claims

[20] The Panel Letter stated that the skilled person, having read the specification, would not have any difficulty understanding most of the terms in the claims.

[21] However, by way of clarification, the letter noted that the skilled person would understand the feature of outputting "a report comprising a representation of the second set of customer data" (in claims 1, 11, 12 and 25) as being a representation of numerical data in a graph or chart, for example, showing the percentage change data, as disclosed in Figures 5A – 5C, and paragraphs 60 and 61.

Essential elements

[22] Having considered the skilled person, their CGK, the problem addressed by the invention and the solution (above), the Panel Letter next addressed the claims in order to ascertain those elements of the claims that are essential in providing the solution. Claim 1 is reproduced here:

A method comprising:
- retrieving, with a computing device, a first set of customer data comprising a first plurality of customer transactions of a retailer for a first time period and a second time period prior to the first time period, wherein each customer transaction of the first plurality of customer transactions is associated with an identified customer of a plurality of identified customers, and wherein the identified customer comprises a customer that is associated with a name of the identified customer and one or more of a mailing address of the identified customer and an email address of the identified customer;
- removing, with the computing device, one or more customer transactions from the first set of customer data, each of which customer transaction occurred during the second time period and is associated with an identified customer that was identified after the second time period so as to determine a second set of customer data comprising a second plurality of customer transactions of the retailer for the first time period and the second time period;
- for each identified customer of the plurality of identified customers:
    - determining, with the computing device, a customer identification weighting factor for the identified customer based on a customer identification likelihood;
    - multiplying, with the computing device, a total number of customer transactions of the second plurality of customer transactions associated with the identified customer by the customer identification weighting factor to determine a weighted total number of customer transactions for the identified customer, and
    - associating, with the computing device, the weighted total number of customer transactions for the identified customer with the identified customer in the second set of customer data; and
- outputting, with the computing device, a report comprising a representation of the second set of customer data.

[23] Claim 1 is considered representative of the disclosed invention. The essential elements of claim 1 are also found in the other independent claims (claims 12 and 25), which differ only in their embodiment (a computer device and a memory, respectively). This is consistent with the Applicant's response to the SOR (page 5), which focussed on the features of claim 1 and acknowledged the similarities of claims 12 and 25 to claim 1.

[24] Although claim 1 defines steps which comprise retrieving, removing, multiplying, associating and outputting data "…*with a computing device…*", it does not appear to us that the skilled person would consider the use of a computing device to be essential to the solution disclosed, i.e., adjusting customer transaction data to remove biases so as to improve the accuracy of the output of unique customers. Although a computing device is a convenient and efficient mechanism to process the data, it is simply operating in its conventional and commonly known manner. Using such a computing device to process

an algorithm or perform a set of calculations does not mean it is essential to the proposed solution.

[25] Accordingly, the skilled person would consider the essential elements of claim 1 to be the particular calculations and steps for analysing and manipulating the data to create a second set of data to remove the time lag and the customer identification bias. This creates an improved set of numbers which more accurately reflect the actual change in unique customers. Specifically, as set out in the Panel Letter (pages 4-5), the essential elements of claim 1 are:

- retrieving a first set of customer data comprising a first plurality of customer transactions of a retailer for a first time period and a second time period prior to the first time period, wherein each customer transaction of the first plurality of customer transactions is associated with an identified customer of a plurality of identified customers, and wherein the identified customer comprises a customer that is associated with a name of the identified customer and one or more of a mailing address of the identified customer and an email address of the identified customer;

- removing one or more customer transactions from the first set of customer data, each of which customer transaction occurred during the second time period and is associated with an identified customer that was identified after the second time period so as to determine a second set of customer data comprising a second plurality of customer transactions of the retailer for the first time period and the second time period;

- for each identified customer of the plurality of identified customers:

    - determining a customer identification weighting factor for the identified customer based on a customer identification likelihood;

    - multiplying a total number of customer transactions of the second plurality of customer transactions associated with the identified customer by the customer identification weighting factor to determine a weighted total number of customer transactions for the identified customer, and

    - associating the weighted total number of customer transactions for the identified customer with the identified customer in the second set of customer data; and

- outputting a report comprising a representation of the second set of customer data.

[26] Claims 12 and 25 contain similar essential elements. As in claim 1, the skilled person would not consider the computer components in claims 12 and 25 (computing device,

processors, or computer-readable storage device) to be essential elements of these claims, as they are not essential to the proposed solution.

[27] Dependent claims 2-11, and 13-24 define additional steps which refine the determination of the customer identification weighting factor, clarify the characteristics of customer accounts and payment information, and define the use of querying a database to obtain addresses of a customer. Accordingly, the essential elements of the dependent claims would be considered by the skilled person to be the steps to determine the data being processed, or the characteristics of the data being processed, and not any associated computer components. The Applicant's response to the Final Action and SOR did not point to any specific limitation in any of the dependent claims that would lead the skilled person to a different conclusion.

ANALYSIS

[28] As set out in the Panel Letter, claims 1-25 on file, as purposively construed, define calculations or rules for determining certain business related data (e.g., those steps to retrieve, remove, determine, associate, multiply or output data related to the unique number of customers for a retail business). The output of the calculations is an improved (more accurate) set of numerical data.

[29] The claims as purposively construed do not define any essential elements having physical existence or that manifest a discernible effect or change. The steps defining the calculations or rules to determine the improved business data are abstract, and thus cannot be considered to provide any discernible change or effect to the user. Instead, the steps only convey information having intellectual significance to an individual reading the data. Furthermore, the skilled person would consider that the output representation is also simply information or numerical data, which is abstract. Any subsequent use of the data is beyond the scope of the claimed solution. No other physical essential features are defined in the claims

[30] Accordingly, the claims are considered to define non-statutory subject matter, and therefore do not comply with section 2 of the *Patent Act*.

Proposed Claims

[31] Proposed claims 1-25 were submitted by the Applicant in response to the Final Action. In accordance with subsection 30(6)(*b*) of the *Patent Rules*, the proposed claims have not been entered as an amendment. Specific amendments could be considered necessary for compliance under subsection 30(6.3) of the Rules, if they overcome the defects in the claims on file without introducing new defects.

[32] The proposed claims primarily differ from the claims on file by the addition to the independent claims 1, 12 and 25 of the expression "based on a characteristic of one or more payment accounts associated with the identified customer". Claim 10 also addresses a minor informality.

[33] As none of the essential elements in the claims on file, as identified above, were specifically addressed or amended by the proposed claims, the non-statutory nature of the invention is not changed in the proposed claims. Therefore, the panel is not satisfied that the proposed claims constitute a specific amendment "necessary" for compliance under subsection 30(6.3) of the *Patent Rules*.

RECOMMENDATION OF THE BOARD

[34] For the reasons given in this recommendation, and as previously provided to the Applicant in the Panel Letter dated April 21, 2016 (which the Applicant's response of May 20, 2016 did not address), we recommend that the application be refused because the claims on file do not define statutory subject matter, contrary to section 2 of the *Patent Act*.

[35] We are also not satisfied that specific amendments proposed by the Applicant are necessary for compliance with the *Patent Act* and *Patent Rules*.

Andrew Strong   Ed MacLaurin   Andrew O'Malley
Member   Member   Member

DECISION

[36] I concur with the conclusions and recommendation of the Patent Appeal Board that the application be refused because claims 1-25 on file do not define statutory subject matter, contrary to section 2 of the *Patent Act*.

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

Johanne Bélisle
Commissioner of Patents

Dated at Gatineau, Quebec,
this 28th day of July, 2016