Commissioner's Decision # 1369
Décision du Commissaire # 1369




TOPIC: O - 00
SUJECT: O - 00




Application No : 2,263,903
Demande no : 2,263,903

IN THE CANADIAN PATENT OFFICE


DECISION OF THE COMMISSIONER OF PATENTS


Patent application number 2,263,903, having been rejected under subsection 30(3) of the *Patent Rules*, has consequently been reviewed in accordance with paragraph 30(6)(c) of the *Patent Rules* by the Patent Appeal Board and the Commissioner of Patents. The findings of the Board and the ruling of the Commissioner follow.

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**INTRODUCTION**

[ 1 ] Application number 2,263,903 was filed on 31 July 1997 and is entitled "SYSTEM FOR SUPPLYING AUTOMATIC STATUS UPDATES USING ELECTRONIC MAIL". The Applicant is EBAY INC. and the inventors are Alan Fisher and Samuel Jerrold Kaplan. The Applicant has claimed priority based on two US applications having filing dates of 08 August 1996 and 08 October 1996.

[ 2 ] The application was rejected in a Final Action because the claimed invention was considered obvious. The Final Action also set out a defect regarding claim redundancy.

[ 3 ] For the reasons that follow, we recommend that the rejection of the application be reversed. We also recommend that certain amendments must be made, which are necessary for compliance with the *Patent Act*, in accordance with subsection 30(6.3) of the *Patent Rules.*

**BACKGROUND**

*Invention*

[ 4 ] The invention concerns a system for automatically updating the status of customer orders and shipments via electronic mail without using a human attendant to create and send the electronic mail messages. The updating system allows a large set of customers to be periodically updated over a computer or communications network via electronic mail. The system includes a database for maintaining order and shipping status and other relevant information.

[ 5 ] The application describes the implementation of the invention using a central server host computer that is attached to a wide area network and is accessible by many potential customers through remote terminals. Information about the customers and their respective orders is maintained in a status database, which may be maintained on the central server host computer. Periodically, a status request is sent to another host computer on the wide area network, and updated status information is placed in the status database. When an update occurs, a flag is set on the particular database record

indicating a change in status. Periodically, an electronic mail messenger checks the status database to see if the status of any record has changed, and if so, it composes and transmits an electronic mail message to the customer based on the new status information in the status database.

*Prosecution history and initial review*

[ 6 ]  Examination was requested on 22 November 2000 and 6 reports were issued beginning on 15 September 2003. The Examiner issued a Final Action on 27 March 2012. On 26 September 2012, new claims were submitted in response to the Final Action, which according to the Examiner did not render the application allowable. Subsequently, the Examiner forwarded the application to the Patent Appeal Board (PAB) along with a Summary of Reasons (SOR). The SOR, which was forwarded to the Applicant, maintained that the new claims were still obvious, but noted the redundancy defect was addressed by the claims submitted in the response to the Final Action (the claims "currently on file").

[ 7 ]  The Applicant responded to the SOR on 10 July 2013 and disputed the allegation of obviousness. In so doing, the Applicant disagreed with the manner in which the skilled person and the common general knowledge of the skilled person had been identified by the Examiner.

[ 8 ]  Three Board members ("the panel") reviewed the written record. In a letter dated 10 December 2013 ("the initial review"), the panel invited the Applicant to address some initial observations and to clarify its understanding of the claims. This letter also included additional evidence of common general knowledge, which the Examiner had provided at the request of the panel.

[ 9 ]  The Applicant provided a written submission along with a proposed set of claims ("the proposed claims") on 23 January 2014. A hearing was held on 24 January 2014.

**THE ISSUE**

[ 10 ]  As noted above, only one issue remains to be addressed by this review:

(1)  Are the claims obvious?

[ 11 ]   We will begin with a purposive construction of the claims before proceeding with our analysis addressing the question of obviousness.  Considering the Applicant's submissions and arguments at the hearing, purposive construction will address the following outstanding matters:

- Identification of the skilled person, in particular, as a "team";
- The common general knowledge (CGK) of the skilled person;
- The problem and solution addressed by the invention;
- The claims on file, the clarifications requested and the acceptability of the proposed changes;
- The proposed claims and additional clarifications needed; and
- The essential elements of the proposed claims.

**PURPOSIVE CONSTRUCTION**

[ 12 ]   During purposive construction, the terms of the claims are defined and the elements of the claimed invention are identified as either essential or non-essential: *Free World Trust v Electro Santé Inc*, 2000 SCC 66 [*Free World Trust*].  Office Practice Notice 2013-02 "*Examination Practice Respecting Purposive Construction*" dated 8 March 2013 [*PN2013-02*] outlines Office practice for performing a purposive construction of claims.  For an element to be considered "non-essential", "it must be shown either (i) that on a purposive construction of the words of the claim it was clearly not intended to be essential, or (ii) that at the date of publication of the patent, the skilled addressees would have appreciated that a particular element could be substituted without affecting the working of the invention" (*Free World Trust* at paragraph 55).

[ 13 ]   Purposive construction is performed through a balanced and informed approach, considering the specification as a whole against the background of the common general knowledge (CGK), including an understanding of the meaning of terms used in the claims, and the problem and solution addressed by the application.  Once identified, the solution then informs the determination of which elements are essential to the claimed invention.  While some elements in a claim may have a material effect on the operation of the embodiment defined by the claim, they may not be essential (i.e. they may be omitted or varied) to the operation of the invention in achieving the solution to the problem.

[ 14 ]   We will first identify the person skilled in the art and the common general knowledge.

*The Person Skilled in the Art*

[ 15 ]   Although the Final Action identifies the skilled person and the CGK in relation to the
obviousness analysis, they are also relevant to claim construction.  The Final Action
characterizes the skilled person as follows:

> The notional skilled worker in this case is a team of electronic
> commerce specialists, comprising not only information technology
> professionals, but also business professionals familiar with mail
> order and electronic commerce business practices.

[ 16 ]   In its submission of 10 July 2013, the Applicant disagreed with this characterization,
stating that *Sanofi-Synthelabo Canada Inc. v. Apotex Inc.,* 2008 SCC 61, [*Sanofi*]
specifies that the notional person is a single individual, and "if 'teams' were the relevant
standard, then the 'common general knowledge' of such teams could effectively be
defined to include the sum total of human knowledge".  In response to our initial review
letter, the Applicant explained that a team may be appropriate only in certain situations in
the case law where it is "required for a Court to construe patent claims", for example,
where the invention described in a patent is developed by a team with different
backgrounds or expertise.  The Applicant stated that in contrast to Court construction,
under the *Sanofi* test the person skilled in the art is not intended to possess expansive
knowledge or inventiveness i.e. the knowledge of a team.  Therefore, according to the
Applicant, the skilled person must be a single person for assessing obviousness.

[ 17 ]   In our opinion, identifying the skilled person as a team may occur in both claim
construction as well as in evaluating obviousness.  *Sanofi* does not require that the skilled
person be a "single person" for carrying out an obviousness analysis.  As explained in
*Whirlpool Corp. v. Camco Inc.,* 2000 SCC 67 [2000], "the 'purposive construction'
approach is adopted for both validity and infringement issues".  Therefore, the person of
ordinary skill in the art must be the same for the assessment of all validity and
infringement issues.  It is incorrect to have one skilled person for claim construction and
a different skilled person for the assessment of obviousness.  For example, in *Merck &
Co. v. Pharmascience Inc*., 2010 FC 510 [*Merck*], at paragraph 41, the Court considered

the skilled person to "be a researcher or clinician, or both" (i.e. a team) and the Court used the same skilled person for its obviousness inquiry (beginning at paragraph 178).

[ 18 ]   As to whether or not the skilled person may be a team or a single individual, in *Merck* at paragraphs 32 and 39, the Court notes that the definition of the skilled person "must generally define the person or group to whom the patent is addressed. It may be that the patent can be read by different persons, each having a different interest. Consideration may have to be given to each such different person." Thus, the skilled person may be a group or team.

[ 19 ]   The Applicant proposed that the skilled person is skilled in the field of electronic commerce and familiar with mail order practices. The Applicant's proposed definition isn't much different from the Examiner's, except that the Examiner explicitly states that the skilled person is a team comprising ". . . electronic commerce specialists . . . information technology professionals . . . professionals familiar with mail order . . . business practices". We consider that the Applicant's proposed skilled person would have these skills too (i.e. electronic commerce and mail order business practice skills and information technology skills). At the hearing, we noted the similarity between the Applicant's and the Examiner's definitions, and the Applicant stated that their contention as to non-obviousness is not dependent on the definition of the skilled person.

[ 20 ]   We conclude that the definition of the skilled person given by the Examiner in paragraph [ 15 ], which comprises a team, is accurate and adopt it for the purpose of these reasons.

*The Relevant Common General Knowledge (CGK)*

*References*

[ 21 ]   The Final Action references the following documents as being related to the CGK of the skilled person:

Towle, H:  "On The Fast Track with TotalTrack: UPS Deploys Mobile Data Service", Document Delivery World (April/May 1993) 30

Ralston, A:  Edwin D. Reilly & David Hemmendinger, ed., Encyclopedia of Computer Science, 4th ed. (London: Nature Publishing Group, July 2000)

*CGK from Towle*

[ 22 ]   The Final Action stated that the CGK of the skilled person includes knowledge of how to develop, implement and operate electronic communications systems (using email, websites, etc.) to keep customers or other participants in a business process informed, including both manually controlled systems and automatic systems.  In particular, the Examiner considered that the system disclosed in Towle is an example of such a system. The Examiner noted "smart scanning" in Towle, whereby bar code technology is used to determine where the package is supposed to be and where it actually is.  Towle explains that UPS TotalTrack can provide detailed information as to the delivery status of a package when a customer calls a toll-free telephone number.

[ 23 ]   The Applicant didn't disagree that the skilled person would have knowledge of Towle's system, but cautioned that a hindsight view should not be adopted because there have been rapid developments in e-commerce and mail order systems since the claim date. We find that Towle generally illustrates that the skilled person would have knowledge of how to develop, implement and operate electronic communications systems (using email, websites, etc.) to keep customers or other participants in a business process informed.

*CGK from Ralston*

[ 24 ]   According to the SOR, Ralston describes "push technology" which is the name commonly given to the sort of technology that the present invention embodies.  In its submissions, the Applicant questioned the admissibility of the Ralston reference because the claim date of the instant application precedes the Ralston reference by more than 3 years.  We find that Ralston does not show that push technology was CGK before the claim date.

[ 25 ]   In view of the Applicant's disagreement with the Examiner's reference to Ralston, during the initial review, we requested the Examiner to find additional support to demonstrate that "push technology" would have been CGK before the claim date.  Based on the Examiner's findings, our initial review letter invited the Applicant to address an excerpt discussing what was known before February 1996 (which pre-dates the claim date of the instant application), in the following document:

Franklin, M: "Data In Your Face: Push Technology in Perspective", 1.1 The Push
Phenomenon, (31 December 1998)

[ 26 ]   Although Franklin is dated after the claim date of the instant application, it discloses that
before February 1996, PointCast proposed to use push technology over the Internet to
display headlines, weather forecasts, stock prices, etc. and to make real time updates to
this information while it is being displayed on a computer.  The initial review letter
invited the Applicant to address our understanding of Franklin: that it demonstrates that
before the claim date, it was well known that in push technology the delivery of updated
information is automatically initiated (or "pushed") by an information server to a
computer.

[ 27 ]   At the hearing and in its submission dated 23 January 2014, the Applicant suggested that
Franklin's explanation about what PointCast was doing in February 1996 was not early
enough (compared to the August 1996 priority date of the instant application) so as to be
considered as common general knowledge.  The Applicant also noted that there wasn't
enough technical information about specific push solutions in Franklin to determine
exactly how their push technology worked.

[ 28 ]   Considering Franklin's limited explanation about what PointCast was doing in February
1996, we find that the Applicant is correct to say that push technology wasn't CGK.  The
manner in which push technology is explained in Franklin does not support the idea that
push technology was common general knowledge before the claim date.

[ 29 ]   We conclude that Franklin and Ralston do not show that push technology was CGK
before the claim date.  The Applicant also argued that push technology was not
particularly relevant to the invention, since "the invention may actually be more
accurately described as a push-pull architecture or system".  We will address this at
paragraph [ 85 ] under step 4 of the *Sanofi* analysis, below.

*Additional CGK identified in the Final Action*

[ 30 ]   The Final Action and the SOR also suggested that the common general knowledge of the
skilled person includes knowledge of the practices of keeping customers informed and
the common mail order practice of notifying customers of updates in the status of their
orders or shipments.  The Applicant's submissions did not dispute that these practices

would have been part of the CGK of the skilled person, and we find that these practices were CGK before the claim date.

*Conclusion as to CGK*

[ 31 ]   We conclude that the common general knowledge of the skilled person includes:
- knowledge of how to develop, implement and operate electronic communications systems (using email, websites, etc.) to keep customers or other participants in a business process informed, including both manually controlled systems and automatic systems, for example, as illustrated by the system in Towle.
- knowledge of the practices of keeping customers informed and the common mail order practice of notifying customers of updates in the status of their orders or shipments; and

## The problem and solution addressed by the invention

[ 32 ]   In its submission dated 10 July 2013, the Applicant notes "a problem with prior art systems is heavy reliance on human customer service representatives and customers for manual order update notifications.  Another problem is a lack of updated information about different processing states of an order.  Known approaches are problematic as they may be time consuming, error prone, costly, and inefficiently use resources."

[ 33 ]   To better understand the problem, the skilled person would consider that an objective of the invention from the specification is to provide a method and system for automatically providing customers with their order status via electronic mail over a computer network without the aid of a human customer service representative and without the need for user profile information.  Thus, the general problem being addressed is to improve a user's satisfaction with the ordering process by providing up-to-date information seamlessly.  This accords with the Applicant's submission.

[ 34 ]   The skilled person would understand that the solution (from the instant application under "Summary of the Invention") is to use software to cause a network-connected computer system to automatically and periodically collect certain information, determine if this collected information is newer than already stored information, and accordingly update the stored information if necessary.  Then, the software causes the system to generate and transmit electronic messages containing the updated information to a customer.

*The claims on file, clarifications requested and the acceptability of the proposed changes*

[ 35 ]   A new set of 12 claims was submitted in response to the Final Action.  Claim 1 recites a
computer readable memory as follows:

> 1.       A computer readable memory for storing programmable
> instructions for use in an execution by a computer to carry out a method
> to collect order processing status over a network and to update users with
> the collected order processing status, said method comprising:
> (a)       storing order information relating to an order submitted by a user
> computer, said order information comprising information relating to
> order processing status for said order, said order being processed by a
> service provider;
> (b)       automatically and periodically requesting status information
> reflecting order processing status for said order from said service
> provider across said network;
> (c)       automatically determining whether the collected status
> information is new relative to further status information pertaining to
> said stored information;
> (d)       automatically updating said status information relating to said
> order based on said status information reflecting order processing status
> collected across said network;
> (e)       automatically generating messages including said status
> information reflecting order processing status responsive to a change in
> said order processing status; and
> (f)       transmitting said messages to said user computer across said
> network.

[ 36 ]   Claim 7 is illustrative of the system of the invention:

> 7.       In a computer network enabling communication between a
> plurality of computers, a system comprising:
>         storage means associated with a first computer for storing order
> information relating to an order submitted by a user computer;
>         requesting means associated with said first computer for
> automatically and periodically requesting order processing status for said
> order from a second computer;

> processing means associated with said first computer for
> determining, automatically, whether the collected status information is
> new relative to further status information pertaining to said stored
> information;
>
> updating means associated with said first computer for receiving
> said order processing status from said second computer, and for
> automatically updating said status information with said order processing
> status;
>
> message generating means for automatically generating a
> message containing said order processing status responsive to a change
> in said order processing status; and
>
> message transmission means for automatically transmitting said
> message across said network to said user computer associated with the
> user without interaction from the user.

[ 37 ]   In our initial review letter, we requested the Applicant to clarify certain aspects of independent claims 1 and 7. The Applicant was invited to submit proposed amendments, which were provided before the hearing.

[ 38 ]   Our letter requested clarification regarding whether or not "the collected status information" in claims 1 and 7 is the information received in response to "requesting order processing status for said order from a second computer". As explained by the Applicant at the hearing, the proposed claims (see paragraphs [ 41 ] and [ 42 ] below) clarify that the collected status information is what is received.

[ 39 ]   The initial review letter also requested clarification as to the nature of "further status information pertaining to said stored information" in claims 1 and 7. Proposed claim 7 deletes "further status information" and clarifies that the collected status information is checked to see if it is "new relative to said order processing status pertaining to said stored information". Claim 1 has been similarly amended.

[ 40 ]   If the claims on file were to be issued absent these changes, claims 1 and 7 would not define the subject matter of the invention "distinctly and in explicit terms" as required by subsection 27(4) of the *Patent Act*. Claims 1 and 7 proposed by the Applicant provide necessary clarity to the claims and are therefore required for compliance under subsection 27(4) of the *Patent Act*. Further, these changes confirm our understanding of claims 1 and 7 as they currently stand. Thus, the proposed changes do not alter the obviousness analysis and these proposed claims will be considered for claim construction and for the

obviousness analysis, below.

*The proposed claims and additional clarifications needed*

[ 41 ]   Claim 1 in the proposed set of claims recites a computer readable memory as follows (emphasis below by the Applicant to show the proposed changes to clarify the claims):

> 1.  A computer readable memory for storing programmable instructions for use in an execution by a computer to carry out a method to collect order processing status over a network and to update users with the collected order processing status, said method comprising:
>
>> (a) storing order information relating to an order submitted by a user computer, said order information comprising information relating to order processing status for said order, said order being processed by a service provider;
>>
>> (b) automatically and periodically requesting status information reflecting order processing status for said order from said service provider across said network, <u>and receiving in response collected status information for said order</u>;
>>
>> (c) automatically determining whether the collected status information <u>includes</u> new <u>status information</u> relative <u>to said order processing status</u> pertaining to said stored information;
>>
>> (d) automatically updating said <u>order processing status</u> relating to said order based on said <u>new</u> status information reflecting order processing status collected across said network;
>>
>> (e) automatically generating messages including said <u>updated</u> order processing status responsive to a change in said order processing status <u>collected from said service provider</u>; and
>>
>> (f) transmitting said messages to said user computer across said network.

[ 42 ]   Claim 7 was also clarified in the Applicant's submission (emphasis below shows the changes proposed by the Applicant):

> 7. In a computer network enabling communication between a plurality of computers, a system comprising:
>
>> storage means associated with a first computer for storing order information relating to an order submitted by a user computer;
>>
>> requesting means associated with said first computer for

automatically and periodically requesting order processing status for said order from a second computer, <u>and receiving in response collected status information for said order</u>;

processing means associated with said first computer for determining, automatically, whether the collected status information is new relative to <u>said order processing status</u> pertaining to said stored information;

updating means associated with said first computer for receiving said <u>collected status information</u> from said second computer, and for automatically updating said <u>order processing status</u> with said <u>new status information</u>;

message generating means for automatically generating a message containing said <u>updated</u> order processing status responsive to a change in said order processing status <u>collected for said order from said second computer</u>; and

message transmission means for automatically transmitting said message across said network to said user computer associated with the user without interaction from the user.

[ 43 ]   Claim 1 as it currently stands as well as proposed claim 1 recite "A computer readable memory for storing programmable instructions for use in an execution by a computer to carry out a method".  This language, namely: "memory for storing ... instructions for use" does not clearly define a statutory claim to a manufacture – *see Manual of Patent Office Practice* (MOPOP), chapter 16.08.04 and *Examination Practice Respecting Computer-Implemented Inventions - PN 2013-03*.  A valid claim to a computer readable memory or medium requires that the computer readable memory has machine-executable (i.e. computer executable) instructions stored on it to cause a computer to carry out the method of the invention.  The Applicant will be required to amend proposed claim 1 accordingly.  This will be addressed in the recommendation following our analysis.

[ 44 ]   During the hearing, the clarity of "processing means . . . said order processing status pertaining to said stored information" in proposed claim 7 was discussed and the Examiner noted that there is no antecedent for this status information as it relates to the stored information.  The Applicant agreed to delete "said" in claim 7 if it is found to be otherwise allowable. This will also be addressed in the recommendation following our analysis.

*Essential elements (proposed claims)*

[ 45 ] As we noted earlier, the skilled person would understand the solution set forth in the instant application is to use software to cause a network-connected computer system to automatically and periodically collect certain information, determine if this collected information is newer than already stored information, and accordingly update the stored information if necessary. Thus, the essential elements of claim 1 are machine executable instructions to cause a network-connected computer to carry out the following functions: automatically and periodically collect and store information obtained from a different entity across the network, determine if this collected information is newer than previously stored information, update the stored information if necessary, and generate and transmit electronic messages containing the updated information to a user. While claim 1 stipulates "a service provider" provides the status information, the skilled person would appreciate that the essential feature of the programmed machine (computer) is the capability to obtain information from a different entity across the network.

[ 46 ] At the hearing, the Applicant emphasized that claim 7 is different from claim 1. The Applicant stated that claim 7 is not redundant with claim 1 because, in contrast to claim 1, it is specifically addressing the division of labour between the first computer and the second computer, an embodiment that is a particular implementation of the invention. The Applicant stated that, for example, one could have a single server that achieves the same thing: collecting information by polling, keeping a database with the stored order information, finding new status information, updating it when required and sending out messages. Thus, there could be embodiments that are not based on having a first computer and a second computer.

[ 47 ] From this explanation and the details in the description, the skilled person would understand that a network-connected computer system in claim 7 cannot be varied or omitted, and therefore it is an essential feature of claim 7. Likewise, in claim 1 the machine executable instructions to access an entity (service provider) across a network cannot be varied or omitted. However, particular embodiments where a single server would perform all of these functions, or distributing certain tasks between a first and second computer, are design features which would be chosen or varied without having a material effect on the way the invention works. Similarly, machine executable instructions for single server functionality or for distributing tasks between a first and second computer would have no material effect on the way the invention works. Thus, these features in claim 7 are not essential: particular functions or the division of functions

amongst "a first computer", "a user computer", and "a second computer".  What is important in the claims is enabling a network-connected computer system to request information from a different entity, as in claims 1 and 7.

[ 48 ]   Therefore, the essential elements of the computer network system of claim 7 are: a requesting means which automatically and periodically collects certain information from a different entity across the network, a processing means which determines if this collected information is newer than already stored information, an updating means to update the stored information if necessary, and a message generating/transmitting means to generate and transmit electronic messages containing the updated information to a person.  Our understanding of these "means" statements is that they encompass software which is stored on a physical memory and is being executed by a processor.  Therefore, the essential elements of claim 7 are analogous to those of claim 1  – *see Manual of Patent Office Practice* (MOPOP), chapter 16.08.05.

[ 49 ]   There are no disagreements in the prosecution with respect to dependent claims 2-6 and 8-12.  These claims recite additional features such as: the status information relates to shipment status; the storage location of the information being on a first and second computer, or on a database in a first or second computer; the format of the message generated; and the use of a network address to identify a user.  As shall be seen in the obviousness analysis below, independent claims 1 and 7 are unobvious and therefore we need not further address the construction of the dependent claims.

**OBVIOUSNESS**

[ 50 ]   As noted earlier, the grounds for rejecting this application set out in the SOR are that claims 1 to 12 are not compliant with section 28.3 of the *Patent Act* in view of the cited prior art.  As we noted earlier at paragraph [ 40 ], our assessment is based on the claims proposed by the Applicant in response to our initial review letter, since these claims provide needed clarity and are consistent with our understanding of the claims currently on file.

[ 51 ]   In response to the Final Action, the Applicant disagreed with the Examiner's analysis leading to his conclusion that the claims are obvious.  These disagreements will be addressed as the need arises, below.

*Principles of law (obviousness)*

[ 52 ]  Section 28.3 of the *Patent Act* sets out the information against which a claim is assessed in an obviousness inquiry:

28.3  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 more than one year before the filing 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.

[ 53 ]  A four-step approach for assessing obviousness is set out in *Sanofi, supra* as follows:

(1)     (a) Identify the notional "person skilled in the art";
        (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?

*Analysis*

*Step 1: Notional "person skilled in the art" and the relevant common general knowledge of that person*

[ 54 ] This first step is common to claim construction above - see paragraphs [ 15 ], [ 20 ] and [ 29 ].

*Step 2: Inventive concept*

[ 55 ] The SOR reviews the proposed set of claims submitted in response to the Final Action and states the inventive concept as follows:

> . . . the inventive concept for proposed claims 1 to 12 is the idea of using software to cause a network-connected computer system to automatically and periodically collect certain information, determine if this collected information is newer than already stored information, and accordingly update the stored information if necessary. Then, the software causes the system to generate and transmit electronic messages containing the updated information to a person.

[ 56 ] This inventive concept, according to the SOR, reflects the change in independent claim 1 from "automatically collecting status information . . . provided by said service provider" to "automatically and periodically requesting status information . . . from said service provider" in the claims currently on file (submitted in response to the Final Action).

[ 57 ] Turning to the Applicant's submission dated 10 July 2013, it states that the claimed invention provides a machine-implemented, technical implementation commensurate with the inventive concept identified by the Examiner. The Applicant particularly emphasized the existence of coded and configured electronic signals over a network, stating that the inventive concept may be a physical computer memory, comprising coded signal sets representing information and instructions that can cause a computer to execute processes.

[ 58 ] We agree with the Applicant that there will be technical features needed to implement the invention set out in the claims, however that does not mean that all of these features are necessarily in the inventive concept for the claims.

[ 59 ] We noted in paragraph [ 48 ] that the essential elements of claim 7 are analogous to those of claim 1 and therefore the inventive concept of these claims is the same. In our understanding, the inventive concept is a networked computer which has been suitably programmed to automatically and periodically collect information from an entity across

the network, determine if this collected information is newer than already stored information, update the stored information if necessary and generate and transmit electronic messages containing the updated information to a user.

[ 60 ]   As we noted earlier under claim construction at paragraph [ 49 ], since our analysis below concludes that independent claims 1 and 7 are unobvious, we need not address the inventive concept(s) of the dependent claims 2-6 and 8-12.

*Step 3:   Difference between the "state of the art" (Kehnemuyi et al., Walden) and the inventive concept*

[ 61 ]   Our conclusions with respect to step 3 ("the differences") are in general agreement with those of the Applicant – see paragraph [ 69 ] below.

[ 62 ]   In the Final Action, the Examiner sets out the following references as prior art:

United States patent
4 975 841        4 December 1990        Kehnemuyi *et al.*

Canadian patent application
2 156 907        29 September 1994     Walden

*Kehnemuyi et al.*

[ 63 ]   Kehnemuyi *et al.* teach a method and an apparatus for automatically contacting customers and reporting customer order status data.  A memory is provided for receiving and storing the customer order status information. The customer order status data includes product order information, scheduled and actual shipping dates and each customer's telephone number.  A telephone dialer is provided and it sequentially dials the customer telephone numbers and a corresponding customer report facsimile is automatically transmitted to each customer.

[ 64 ]   As explained on column 2, lines 35-59 of Kehnemuyi *et al.*, the facsimile report is composed by a personal computer system which is coupled to a mainframe computer system.  The personal computer translates and stores a separate customer report data file, and uses conversion and command routines to send the separate customer report files.

Claim 1 and columns 3 and 4 explain the steps of determining if order records are valid (checking the order shipping date) and matching the correct records with the correct telephone numbers.

[ 65 ]   Considering the inventive concept, the feature of automatically and periodically requesting/collecting the information over a network is not disclosed by Kehnemuyi *et al.* While Kehnemuyi *et al.* disclose a mainframe computer system communicating with a personal computer system [see (12) and (20) in Figure 1], these components are not used for requesting or collecting status information over a network from a different entity. From column 2, lines 35-49 the personal computer system interacts with the mainframe system to execute a customer report conversion and control program. Therefore, automatically and periodically requesting/collecting the information over a network in the inventive concept is a difference over Kehnemuyi *et al.*

[ 66 ]   There is no suggestion in Kehnemuyi *et al.* that the status information is kept up-to-date automatically (i.e. determining if the collected information is newer, and if so, updating this information). Furthermore, the status information is not requested from a different entity such as a second computer over a network. Therefore, keeping the information up-to-date automatically (i.e. determining if the collected information is newer, and if so, updating this information) is a difference over Kehnemuyi *et al.*

[ 67 ]   The inventive concept also includes the feature of generating and transmitting electronic messages containing the updated information to a user. In Kehnemuyi *et al.*, the computer system is programmed to cause a telephone dialer and communications module to sequentially transmit a facsimile document for each of the customers via a communication link (see column 2, lines 54-59). The facsimile report is limited to current information, with order data over 5 days old being eliminated (column 2, lines 19-21). This implies that the programming captures up-to-date order status data (as long as it is less than 5 days old) i.e. there is an electronic message to the user with the status information, which must also include up-to-date information (albeit manually updated). However, the programming does not include decision logic to transmit a report only when updated status data is available. Therefore, generating and transmitting electronic messages containing the updated information to a user is a difference over Kehnemuyi *et al.*

[ 68 ]   In summary, the inventive concept is different from Kehnemuyi *et al.* in the following

respects:

(a)      the (new) information is automatically and periodically requested/collected from a different entity across a network (as opposed to manual entry);

(b)      the status information is kept up-to-date automatically (i.e. determining if the collected information is newer, and if so, updating this information);

(c)      the system generates and transmits electronic messages containing the updated information to a user.

[ 69 ]   The Applicant's submissions point to the following differences.  In our opinion, these differences are the same as those noted above and contain the same essential elements:

1.      automatically and periodically requesting status information over a network;

2.      automatically determining whether the collected status information is new relative to stored status information pertaining to stored information;

3.      automatically updating the status information; and

4.      in response to a change in order processing status, messages with the changed status information are automatically generated and transmitted.

[ 70 ]   The Final Action (and the SOR referencing it) presents differences (b) and (c) in a different light.  It argues there are no differences i.e. these differences are "implicit in the teachings of Kehnemuyi *et al.*" since the order status information in Kehnemuyi *et al.* is kept up-to-date by its operators who will update records with newer information when that information is available.  In response to the Examiner's views, the Applicant pointed to column 3, lines 5 to 11 of Kehnemuyi *et al.* to show that Kehnemuyi *et al.* appears to only provide "identifying" of order records which is not the same as "requesting".  Further, the Applicant noted that in Kehnemuyi *et al.* the order processing status is not requested from a different entity, for example, a service provider or a second computer.  We agree with the Examiner that in Kehnemuyi *et al.* it is implicit that the order status information is kept up-to-date; however, it is done manually.  Therefore, it is not accurate to say that difference (b) is not a difference for the skilled person reading Kehnemuyi *et al.*

[ 71 ]   With respect to (c), as we noted above, Kehnemuyi *et al.* do not decide to transmit a report only when updated status data is available, though the Examiner is correct to say there must be some logic in Kehnemuyi *et al.* to check the stored information for changed

records (i.e. programming captures status data as long as it is less than 5 days old).   So generating and transmitting electronic messages containing the updated information to a user [difference (c)] is a difference over Kehnemuyi *et al.*

[ 72 ]   To conclude, the differences between the inventive concept and Kehnemuyi *et al.* are (a), (b) and (c) as set out in paragraph [ 68 ] above.

*Walden*

[ 73 ]   Although we provide a brief overview of Walden below, we find that the Walden disclosure would not assist the skilled person in bridging any of the differences over Kehnemuyi *et al.*

[ 74 ]   Walden teaches a system for assisting the computer operations of an organization. The system has a dictionary of operations of the organization, an organizer for organizing information entered at a first input/output device; and a transmitter for transmitting organized information to a second input/output device. Walden relates to a manufacturing environment where multiple departments interact with each other, for example: Shipping-Receiving, Quality Control, Stockroom, Procurement, Production Control, Production, Cost Accounting, Accounts Payable, etc.

[ 75 ]   From pages 4, 5, 8, 9, 15, 25 to 28 of Walden we note the following features:  a manufacturing plant can make use of the system to communicate the status of a damaged part through routed tasks to staff.  The system automatically tracks all activities between originators and receivers by assigning relational codes, which identify the type of information being passed and all parties involved in its processing.  Through the codes, the system may monitor, ensure, actively direct and/or initiate inter-user activities.  In addition, the system can query the sum of activities over a given period and provide analytical summaries to management and store information in a database.

[ 76 ]   The Applicant submitted that Walden does not teach means for automatically and periodically requesting status information; Walden does not disclose automatically determining whether the collected status information is new relative to stored status information; Walden does not disclose automatically updating the status information; and Walden does not teach that, in response to a change in order processing status, messages with the changed status information are automatically generated and transmitted.  These

differences correspond to the differences (a) to (c) in paragraph [ 68 ] above.  The Applicant further pointed to text on page 20 of Walden to outline other differences.

[ 77 ]   The Final Action acknowledges that Walden does not teach a system that automatically determines if the collected information is newer than the stored records prior to updating them accordingly – difference (b) in paragraph [ 68 ] above.

[ 78 ]   Following a review of these arguments and the Walden disclosure, we find that Walden does not add anything to the state of the art of relevance to the inventive concept.  In our opinion, that a manufacturing plant can make use of the system in Walden to communicate the status of a damaged part is of little assistance to the skilled person seeking a solution to the problem addressed by the instant application.

[ 79 ]   Therefore, we conclude the differences between the inventive concept and the state of the art are the same as those identified with respect to Kehnemuyi *et al.*, namely: differences (a) to (c) in paragraph [ 68 ] above.

*Step 4: Would the differences "constitute steps which would have been obvious to the person skilled in the art"?*

[ 80 ]   Below, we consider each of the differences (a) to (c) in paragraph [ 68 ] above along with the relevant statements by the Examiner and Applicant as to obviousness.  Each difference is considered individually for the assessment of inventiveness, and subsequently the differences will also be assessed in combination.

*Difference (a) - The (new) information is automatically and periodically requested/collected from a different entity across a network (as opposed to manual entry)*

[ 81 ]   One argument by the Examiner for lack of inventive step is that "it is common general knowledge to manually collect updated order status information with a goal of keeping customers informed . . . and, in general, the concept or idea of automating or computerizing a known administrative procedure in a known manner is obvious."  The Examiner points to Kehnemuyi *et al.* as providing an example of means for implementing this concept: "a personal computer, under the direction of software, automatically and periodically interrogates the mainframe, via the system's network, to collect status information in the form of customer report files."  We agree that it was CGK to manually

collect updated status information and in our opinion, difference (a) i.e. the automatic/periodic collection of status information would have been an obvious technical improvement on the claim date.

*Difference (b) - The status information is kept up-to-date automatically (i.e. determining if the collected information is newer, and if so, updating this information)*

[ 82 ]   The Examiner's argument is that this difference is "inherent in the manual process of keeping customers notified of changes in the status of their orders" in view of the invention in *Kehnemuyi et al.*  While a mere automation of a manual process can be obvious, it does not apply where some technical innovation occurs in automating it.  In our opinion, the technology involved in checking new information to determine if older information should be replaced and then updating the information, can be inventive.

[ 83 ]   We reference our earlier finding that push technology was not CGK (see paragraphs [ 28 ] and [ 29 ] - Franklin) before the priority date of 08 August 1996.  Even if it could be argued that the skilled person would have at least known about this push technology, in our opinion, difference (b) of keeping the status information up-to-date automatically (i.e. determining if the collected information is newer, and if so, updating this information) would not have been obvious in view of the state of the art, for the following reasons:

[ 84 ]   In push technology, the delivery of updated information is automatically initiated or pushed by an information server to a computer, which would mean that information is collected (e.g. weather or news information) and it is determined if it is newer before it is delivered or pushed to a user.  However, as noted by the Applicant at the hearing, Franklin is not clear as to the manner in which these operations occur.

[ 85 ]   Therefore, we consider that the skilled person reading Franklin and Kehnemuyi *et al.* would have had to exercise inventive effort in adapting the new push concept to arrive at the inventive concept in the claims.  In its submission, the Applicant also argued that the invention is based on a push-pull architecture and incorporates a "push" aspect in using automated notification and a "pull" aspect in the "automatic and periodic requesting of status information".  According to the Applicant, "the application constitutes a very early, if not the earliest, instance of such a push-pull system."  This reasoning is convincing and given the early priority date of the instant application, we consider that there is some

degree of ingenuity in difference (b), regardless of whether or not Franklin would have been considered by the skilled person.

[ 86 ]   While the above is sufficient for us to conclude that claims 1 and 7 are not obvious, we will also assess the difference (c) and the differences in combination, for completeness.

*Difference (c) - The system generates and transmits electronic messages containing the updated information to a user*

[ 87 ]   With respect to difference (c), the description of the instant application (see pages 4-5; reference numerals below cross reference the drawings) explains the implementation:

> when status receiver 14 updates the status in status database 16, it sets a flag on the particular database record indicating a change in status.
> . . .
> Periodically, electronic mail messenger 15 checks status database 16, to see if the status of any record has changed, by examining the records' status flags. If a record has been flagged, then electronic mail messenger 15 composes an electronic mail message 12 based on the new status information in status database 16. This electronic mail message 12 is transmitted to the customer over the wide area network 275.

[ 88 ]   While the technical implementation of difference (c) above may seem simple, in our opinion there is some degree of ingenuity in the idea or concept of designing the electronic mail messenger so that it pushes or forwards a message only when a record has been flagged indicating a change in status.

*The differences in combination*

[ 89 ]   As seen in paragraph [ 87 ] above, the updating of information [difference (b)] triggers additional information to be communicated [difference (c)].  We also noted that given the limited knowledge of push technology that the skilled person would have had, there would have been some degree of ingenuity in keeping the status information up-to-date automatically (i.e. determining if the collected information is newer, and if so, updating this information) i.e. difference (b).  At paragraph [ 29 ], we noted that the CGK of the skilled person includes knowledge of how to develop, implement and operate electronic communications systems (e.g. which use email, websites, etc.) to keep customers or other

participants in a business process informed. Thus, the skilled person having knowledge of the systems in Towle and Kehnemuyi *et al.*, could have been led to consider automatic collection of order status information from across a network as noted by the Examiner [difference (a)]. However, the skilled person would not have at the same time arrived at the concept of designing an electronic mail messenger so that it pushes or forwards a message only when a record has been flagged indicating a change in status.

[ 90 ] Thus, there is inventive step in the combination of features set out in differences (a), (b) and (c). In particular, requesting/collecting new information from a different entity over a network, keeping the status information up-to-date automatically, and transmitting messages with the changed status information automatically are features that in combination provide an unobvious advance in the technical functioning of the invention as compared to the state of the art.

*Conclusions: Obviousness and claim amendments required*

[ 91 ] Our analysis above relates to proposed claims 1 and 7. As we noted earlier at paragraph [ 40 ], the proposed clarifications in claims 1 and 7 are consistent with our understanding of the claims currently on file. Accordingly, we find that claims 1 and 7 currently on file as well as proposed claims 1 and 7 comply with section 28.3 of the *Patent Act*. It follows that dependent claims 2-6 and 8-12, which include all of the essential features of claims 1 and 7 respectively, are also unobvious and comply with section 28.3 of the *Patent Act*.

[ 92 ] As explained at paragraph [ 40 ], the claims must be compliant with subsection 27(4) of the *Patent Act*. Therefore, the Applicant will be required to submit the proposed changes to the claims on file under subsection 30(6.3) of the *Patent Rules*, to clarify proposed claim 1 so that it claims a statutory manufacture (see paragraph [ 43 ]), and to amend proposed claim 7 by changing "said order processing status" to "order processing status" as discussed at the hearing (see paragraph [ 44 ]). The proposed changes clarify the claims and were considered in our analysis.

**RECOMMENDATION**

[ 93 ] In view of the above findings, the Board recommends that:

1.      The rejection of the application be reversed, because claims 1-12 are compliant

with subsection 28.3 of the *Patent Act*.

2.      The Applicant be informed, in accordance with subsection 30(6.3) of the *Patent Rules*, that the following amendments of the application are necessary for compliance with subsection 27(4) of the *Patent Act*:

   i)      replace claims 1 and 7 currently on file with claims 1 and 7 proposed in the Applicant's submission (see paragraph [ 40 ]);

   ii)     amend claim 1 from the proposed claim set so that it claims a statutory manufacture (see paragraph [ 43 ]); and

   iii)    amend claim 7 from the proposed claim set by changing "said order processing status" to "order processing status" as discussed at the hearing (see paragraph [ 44 ] );

The required changes to proposed claims 1 and 7 are as follows [underlining and strikeout added to show the changes with respect to the proposed claims]:

> 1.  A computer readable memory having recorded thereon machine executable instructions to cause ~~for storing programmable instructions for use in an execution by~~ a computer to carry out a method to collect order processing status over a network and to update users with the collected order processing status, said method comprising:
>
>     (a) storing order information relating to an order submitted by a user computer, said order information comprising information relating to order processing status for said order, said order being processed by a service provider;
>
>     (b) automatically and periodically requesting status information reflecting order processing status for said order from said service provider across said network, and receiving in response collected status information for said order;
>
>     (c) automatically determining whether the collected status information includes new status information relative to said order processing status pertaining to said stored information;
>
>     (d) automatically updating said order processing status relating to said order based on said new status information reflecting order processing status collected across said network;

(e) automatically generating messages including said updated order processing status responsive to a change in said order processing status collected from said service provider; and

(f) transmitting said messages to said user computer across said network.

7. In a computer network enabling communication between a plurality of computers, a system comprising:

storage means associated with a first computer for storing order information relating to an order submitted by a user computer;

requesting means associated with said first computer for automatically and periodically requesting order processing status for said order from a second computer, and receiving in response collected status information for said order;

processing means associated with said first computer for determining, automatically, whether the collected status information is new relative to ~~said~~ order processing status pertaining to said stored information;

updating means associated with said first computer for receiving said collected status information from said second computer, and for automatically updating said order processing status with said new status information;

message generating means for automatically generating a message containing said updated order processing status responsive to a change in said order processing status collected for said order from said second computer; and

message transmission means for automatically transmitting said message across said network to said user computer associated with the user without interaction from the user.

3.     The Applicant be advised that if the above amendments, and only the above amendments, are not made within the specified time, the Commissioner intends to refuse the application.

| Paul Sabharwal | Paul Fitzner | Andrew Strong |
|---|---|---|
| Member | Member | Member |

**DECISION**

[ 94 ]   I concur with the findings and recommendation of the Board.  In accordance with subsection 30(6.3) of the *Patent Rules*, I hereby notify the Applicant that the amendments specified in paragraph [ 93 ] have to be made within three months after the date of this decision, failing which I intend to refuse the application.  In accordance with  paragraph 31(*b*) of the *Patent Rules*, these amendments and only these amendments, may be made to the application.

Sylvain Laporte
Commissioner of Patents

Dated at Gatineau, Quebec,
this 18th day of July, 2014