IN THE CLAIMS

Please amend the claims as follows:

1.   (Currently Amended) A method comprising:

determining, using an electronic device, a problem ticket for a customer, wherein the problem ticket indicates a problem and information about the customer;

searching, using the electronic device, a set of one or more customer support personnel databases based, at least in part, on the problem, a first customer support level, and the information about the customer, wherein said searching yields a first support person of the first customer support level;

routing, using the electronic device, the problem ticket to the first support person;

searching the set of one or more customer support personnel databases based, at least in part, on the problem, a second customer support level, and the information about the customer, wherein said searching yields a second support person of the second support level, wherein the second customer support level corresponds to a greater amount of one or more of skills, knowledge, and experience; and

routing the problem ticket to the second support person when the first support person fails to resolve the problem

determining, using the electronic device, that the first support person of the first customer support level cannot resolve the customer problem;

determining that the first support person should work in conjunction with one of a plurality of personnel of a second customer support level to resolve the problem;

determining, based on accessing a dynamic social network database via the electronic device, information associated with the first support person and the plurality of personnel of the second customer support level;

determining a relationship score that indicates a strength of a relationship between the first support person and each of the plurality of personnel of the second customer support level;

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111
Application Number: 12/254,092
Filing Date: Oct 20, 2008
Title: WORKFLOW MANAGEMENT IN A GLOBAL SUPPORT ORGANIZATION
Assignee: International Business Machines Corporation

Page 4
Dkt: AUS920080455US1

determining that the relationship score between the first support person and a first of the plurality of personnel of the second customer support level is the highest relationship score; and

prompting the first support person to work in conjunction with the first of the plurality of personnel of the second customer support level to resolve the customer problem.

2. (Currently Amended) The method of claim 1, wherein said searching the set of one or more customer support personnel databases based, at least in part, on the problem, the first customer support level, and the information about the customer further comprises also searching [[a]] the dynamic social network database based, at least in part, on the problem and the information about the customer.

3. (Original) The method of claim 2, wherein said searching the dynamic social network database is also based on information about the first support person.

4. (Original) The method of claim 1 further comprising searching the set of one or more databases and the dynamic social network database based, at least in part on the problem, the first customer support level, and the information about the customer when the first support person fails to resolve the problem, wherein said searching yields a second support person of the first customer support level.

5. (Original) The method of claim 1, wherein the customer support personnel databases comprise any one or more of a personnel experience database, a personnel knowledge and skill set database , a personnel location database , a personnel success rate database , and a personnel availability database.

6. (Currently Amended) The method of claim 1, wherein information in the dynamic social network database comprises personnel language of the first support person and the plurality of personnel of the second customer support level, interests of the first support person and the plurality of personnel of the second customer support level, one or more collaborating colleagues of the first support person and the plurality of personnel of the second customer support level, number of chat conversations initiated by the first support

person and the plurality of personnel of the second customer support level, and number of emails exchanged by the first support person and the plurality of personnel of the second customer support level.

7.   (Currently Amended) A method comprising:

determining, using an electronic device, a problem ticket for a customer, wherein the problem ticket indicates a problem and information about the customer;

searching, using the electronic device, a set of one or more customer support personnel databases based, at least in part, on the problem, a first customer support level, and the information about the customer, wherein said searching yields a plurality of support persons of the first customer support level;

searching, using the electronic device, a dynamic social network database that comprises interests of the plurality of support persons of the first customer support level and the customer based, at least in part on the information about the customer, the problem, and indications of the plurality of support persons of the first customer support level, wherein said searching yields a first of the plurality of support persons that has common interests with the customer; and

routing, using the electronic device, the problem ticket to the first of the plurality of support persons.

8.   (Original) The method of claim 7, further comprising:

determining that the first of the plurality of support persons resolved the problem; and

updating both the dynamic social network database and at least one of the set of customer support personnel databases to reflect the first of the plurality of support persons resolving the problem.

9.   (Currently Amended) The method of claim 8, wherein:

the determining, using the electronic device, the problem ticket for the customer further comprises one or more of detecting that the customer has initiated a phone call and detecting that the customer is logged into a chat window; and

the determining that the first of the plurality of support persons resolved the problem

comprises one or more of detecting that the customer has disconnected [[a]] the

phone call and detecting that the customer has logged off [[a]]the chat window.

10.   (Original) The method of claim 7, wherein the first of the plurality of support persons

shares, with the customer, any one of a common language, common cultural background,

common interests, and common location.

11.   (Currently Amended) One or more machine-readable storage media having stored therein

a program product, which when executed a set of one or more processors causes the set

of one or more processors to perform operations that comprise:

determining a problem ticket for a customer, wherein the problem ticket indicates a

problem and information about the customer;

searching a set of one or more customer support personnel databases based, at least in

part, on the problem, a first customer support level, and the information about the

customer, wherein said searching yields a first support person of the first

customer support level;

routing the problem ticket to the first support person;

searching the set of one or more customer support personnel databases based, at least in

part, on the problem, a second customer support level, and the information about

the customer, wherein said searching yields a second support person of the second

support level, wherein the second customer support level corresponds to a greater

amount of one or more of skills, knowledge, and experience; and

routing the problem ticket to the second support person when the first support person fails

to resolve the problem

determining that the first support person of the first customer support level cannot resolve

the customer problem;

determining that the first support person should work in conjunction with one of a

plurality of personnel of a second customer support level to resolve the problem,

determining, based on accessing a dynamic social network database, information

associated with the first support person and the plurality of personnel of the
second customer support level;

determining a relationship score that indicates a strength of a relationship between the
first support person and each of the plurality of personnel of the second customer
support level;

determining that the relationship score between the first support person and a first of the
plurality of personnel of the second customer support level is the highest
relationship score; and

prompting the first support person to work in conjunction with the first of the plurality of
personnel of the second customer support level to resolve the customer problem.

12.   (Currently Amended) The machine-readable storage media of claim 11, wherein said
operation of searching the set of one or more customer support personnel databases
based, at least in part, on the problem, the first customer support level, and the
information about the customer further comprises searching [[a]] the dynamic social
network database based, at least in part, on the problem and the information about the
customer.

13.   (Currently Amended) The machine-readable storage media of claim 12, wherein said
operation of searching the dynamic social network database is also based on information
about the first support person.

14.   (Currently Amended) The machine-readable storage media of claim 11, wherein the
operations further comprise searching the set of one or more databases and the dynamic
social network database based, at least in part on the problem, the first customer support
level, and the information about the customer when the first support person fails to
resolve the problem, wherein said searching yields a second support person of the first
customer support level.

15.   (Currently Amended) The machine-readable storage media of claim 11, wherein the
customer support personnel databases comprise any one or more of a personnel

experience database, a personnel knowledge and skill set database , a personnel location database , a personnel success rate database , and a personnel availability database.

16.   (Currently Amended) The machine-readable storage media of claim 11, wherein information in the dynamic social network database comprises personnel language of the first support person and the plurality of personnel of the second customer support level, interests of the first support person and the plurality of personnel of the second customer support level, one or more collaborating colleagues of the first support person and the plurality of personnel of the second customer support level, number of chat conversations initiated by the first support person and the plurality of personnel of the second customer support level, and number of emails exchanged by the first support person and the plurality of personnel of the second customer support level.

17.   (Currently Amended) One or more machine-readable storage media, wherein the operations comprise:

determining a problem ticket for a customer, wherein the problem ticket indicates a problem and information about the customer;

searching a set of one or more customer support personnel databases based, at least in part, on the problem, a first customer support level, and the information about the customer, wherein said searching yields a plurality of support persons of the first customer support level;

searching a dynamic social network database that comprises interests of the plurality of support persons of the first customer support level and the customer based, at least in part on the information about the customer, the problem, and indications of the plurality of support persons of the first customer support level, wherein said searching yields a first of the plurality of support persons that has common interests with the customer; and

routing the problem ticket to the first of the plurality of support persons.

18.   (Currently Amended) The machine-readable storage media of claim 17, wherein the operations also comprise:

determining that the first of the plurality of support persons resolved the problem; and

updating both the dynamic social network database and at least one of the set of customer support personnel databases to reflect the first of the plurality of support persons resolving the problem.

19.   (Currently Amended) The machine-readable storage media of claim 18, wherein:

said operation of determining the problem ticket for the customer using the electronic device further comprises one or more of detecting that the customer has initiated a phone call and detecting that the customer is logged into a chat window; and

said operation of determining that the first of the plurality of support persons resolved the problem comprises one or more of detecting that the customer has disconnected [[a]] the phone call and detecting that the customer has logged off [[a]]the chat window.

20.   (Currently Amended) The machine-readable storage media of claim 17, wherein the first of the plurality of support persons shares, with the customer, any one of a common language, common cultural background, common interests, and common location.

21.   (Currently Amended) An apparatus comprising:

a set of one or more processors;

a memory unit coupled with the set of one or more processors; and

an automated resource selection and allocation engine operable to:

determine a problem ticket for a customer, wherein the problem ticket indicates a problem and information about the customer;

search a set of one or more customer support personnel databases based, at least in part, on the problem, a first customer support level, and the information about the customer, wherein the search yields a first support person of the first customer support level;

route the problem ticket to the first support person;

~~search the set of one or more customer support personnel databases based, at least in part, on the problem, a second customer support level, and the~~

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111   Page 10
Application Number: 12/254,092   Dkt: AUS920080455US1
Filing Date: Oct 20, 2008
Title: WORKFLOW MANAGEMENT IN A GLOBAL SUPPORT ORGANIZATION
Assignee: International Business Machines Corporation

~~information about the customer, wherein the search yields a second support person of the second support level, wherein the second customer support level corresponds to a greater amount of one or more of skills, knowledge, and experience; and~~

~~route the problem ticket to the second support person when the first support person fails to resolve the problem~~

determine that the first support person should work in conjunction with one of a plurality of personnel of a second customer support level to resolve the problem, in response to the automated resource selection and allocation engine determining that the first support person of the first customer support level cannot resolve the customer problem;

determine, based on accessing a dynamic social network database, information associated with the first support person and the plurality of personnel of the second customer support level;

determine a relationship score that indicates a strength of a relationship between the first support person and each of the plurality of personnel of the second customer support level;

determine that the relationship score between the first support person and a first of the plurality of personnel of the second customer support level is the highest relationship score; and

prompt the first support person to work in conjunction with the first of the plurality of personnel of the second customer support level to resolve the customer problem.

22. (Currently Amended) The apparatus of claim 21, wherein the automated resource selection and allocation unit being operable to search the set of one or more customer support personnel databases based, at least in part, on the problem, the first customer support level, and the information about the customer further comprises the automated resource selection and allocation engine being operable to search [[a]] the dynamic social

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111
Application Number: 12/254,092
Filing Date: Oct 20, 2008
Title: WORKFLOW MANAGEMENT IN A GLOBAL SUPPORT ORGANIZATION
Assignee: International Business Machines Corporation

Page 11
Dkt: AUS920080455US1

network database based, at least in part, on the problem and the information about the customer.

23. (Original) The apparatus of claim 21, further comprises the automated resource selection and allocation engine being operable to search the set of one or more databases and the dynamic social network database based, at least in part on the problem, the first customer support level, and the information about the customer when the first support person fails to resolve the problem, wherein the search yields a second support person of the first customer support level.

24. (Original) The apparatus of claim 21, further comprising:

a data collection and analysis engine operable to dynamically update a dynamic social network database based on any one or more of interactions between support personnel, the customers, interactions between the customers and the support personnel, and problem resolution.

25. (Original) The apparatus of claim 21, wherein the automated resource selection and allocation engine comprises one or more machine-readable media.

UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/254,092	10/20/2008	Moises Cases	AUS920080455US1	1755

70426   7590   07/08/2011
IBM AUSTIN IPLAW (DG)
C/O DELIZIO GILLIAM, PLLC
15201 MASON ROAD, SUITE 1000-312
CYPRESS, TX 77433

EXAMINER
ARAQUE JR, GERARDO

ART UNIT	PAPER NUMBER
3689	

NOTIFICATION DATE	DELIVERY MODE
07/08/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTO@DELIZIOGILLIAM.COM
USPTO2@DELIZIOGILLIAM.COM

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	12/254,092	CASES ET AL.
	Examiner	**Art Unit**	
	GERARDO ARAQUE JR	3689	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>20 October 2008</u>.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-25</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-25</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>10/20/2008</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2.   **Claims 9 and 19** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3.   **Claims 9 and 19** recite the limitation **"logged off a chat window"** in the **last line of the claim**. The Examiner asserts that the claims have failed to set forth any limitation that discloses that the customer was logged into a chat window and are too broad to distinguish whether or not the claimed invention was being performed on a computer system and using a electronic chat service. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

4.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5.   **Claims 1 – 10** are rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter. Based upon consideration of all of the relevant factors with respect to the claims as a whole, **claims 1 – 10** are held to claim an abstract idea, and are therefore rejected as ineligible subject matter under 35 U.S.C. 101. The rationale for this finding is explained below:

Based on Supreme Court precedent and recent Federal Circuit decisions, the

Office's guidance to an examiner is that one clue to patent eligibility under 35 USC §

101 is whether or not the process is (1) be tied to a particular machine or apparatus or

(2) transform underlying subject matter (such as an article or materials) to a different

state or thing. Diamond v. Diehr, 450 U.S. 175, 184 (1981); Parker v. Flook, 437 U.S.

584, 588 n.9 (1978); Gottschalk v. Benson, 409 U.S. 63, 70 (1972); Cochrane v.

Deener, 94 U.S. 780, 787-88 (1876).

The claim should recite the particular machine or apparatus to which it is tied, for

example by identifying the machine or apparatus that accomplishes the method steps,

or positively reciting the subject matter that is being transformed, for example by

identifying the material that is being changed to a different state.

There are two corollaries to the machine-or-transformation test. First, a mere

field-of-use limitation is generally insufficient to render an otherwise ineligible method

claim patent-eligible. This means the machine or transformation must impose

meaningful limits on the method claim's scope to pass the test. Second, insignificant

extra-solution activity will not transform an unpatentable principle into a patentable

process. This means reciting a specific machine or a particular transformation of a

specific article in an insignificant step, such as data gathering or outputting, is not

sufficient to pass the test.

Here, applicant's method steps fail the first prong of the new test because there

is not tie to any kind of machine or any of the claimed steps. The Examiner asserts that

the claims are broad enough to encompass that a user and not a computer or, at the

very least, a user using a computer are performing the various steps of claimed

invention. Specifically, the Examiner asserts that the steps of determining a problem

ticket, searching for a support person, and routing the problem ticket to support

personnel are being performed by a user and not a particular machine. Although there

is a use of a database the Examiner asserts that a database is nothing more than a

collection of data and is not equivalent to a storage medium. Further still, even if one

were to argue that a storage medium is required the Examiner asserts that 1) the claims

fails to explicitly disclose that a particular machine is performing the actual searching

and 2) the argued storage medium is simply directed towards an insignificant extra

solution activity since the mere act of data gathering, i.e. storage, is not sufficient to

pass the machine or transformation test. The claims do not pass the first test of Bilksi to

providing a tie to a particular machine.

Further, applicant's method steps fail the second prong of the test because there

is no transformation of the data. It is asserted that the data has not been transformed

into another state or into another object.

The applicant is reminded that:

"Purported transformation or manipulations simply of public or private legal
obligations or relationships, business risks, or other such abstractions
cannot meet the test because they are not physical objects or substances,
and they are not representative of physical objects or substances.

(In re Bernard L. Bilski and Rand A. Warsaw Page 28)"

Moreover, the "transformation must be central to the purpose of the claimed

process.

(In re Bernard L. Bilski and Rand A. Warsaw Page 28)"

Additionally, other factors and considerations in addition to the machine/transformation test also point to a finding that the claims are directed to a mere abstract idea. The claims seem to be a mere statement of a general concept of speaking with a customer service representative. The claims if allowed would appear to effectively grant a monopoly on the concept of searching for the appropriate customer service representative and having a problem resolved. The process of determining a problem ticket, searching for a support personnel, and routing the problem ticket to the appropriate support personnel could be performed by any currently known or future manner of customer service, or even done by human beings because no machine is recited explicitly or implied in the claims, which has been programmed to perform this step. Although it is implied that a computer storage medium is being used to store the database, it is asserted that the machine is merely directed to an insignificant extra solution activity. The claims seem to be directed to a general business concept of speaking with a customer service representative. When viewing these factors and the claims as whole, it is concluded that the claims are directed to a mere abstract idea and are not patent eligible under 35 USC 101.

Dependent **claims 2 – 6 and 8 – 10** when analyzed as a whole are held to be patent ineligible under 35 U.S.C. 101 because the additional recited limitation(s) fail(s) to establish that the claims are not directed to an abstract idea, for the same reasoning as set forth with respect to **claims 1 and 10**. The dependent claims do not act to remedy the problem with **claims 1 and 10** by reciting (explicitly or implied) the use of any particular machine and/or any significant transformation.

6.   **Claims 11 – 20** are rejected under 35 U.S.C. 101 because the claimed invention

is directed to non-statutory subject matter. Computer-readable medium as described in

the specification is defined as being communication connection that comprises of a

wireless signal and at this time, signals are currently considered forms of energy and

therefore are non-statutory. In order to remedy the rejection, the Examiner suggests

amending the claims to disclose that the computer readable medium is non-transitory.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

8.   **Claims 1 – 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Riley et al. (US PGPub 2002/0123983 A1).

9.   In regards to **claim 1**, **Riley** discloses a method comprising:

determining a problem ticket for a customer, wherein the problem ticket indicates

a problem and information about the customer **(Page 2 ¶ 29; Page 4 ¶ 57; Page 5 ¶ 79;**

Page 6 ¶ 94; Page 7 ¶ 98, 105, 107, 109 wherein a problem ticket is determined for

a customer and includes information about the problem and the customer);

searching for a first customer support level, and the information about the

customer, wherein said searching yields a first support person of the first customer

support level **(Page 5 ¶ 78; Page 6 ¶ 94, 95; Page 7 ¶ 107; Page 8 ¶ 110; Page 9 ¶**

138, 139; Page 10 ¶ 142 wherein a problem ticket is categorized and prioritized for

assignment to the appropriate support person in the appropriate tier, e.g. initially

assigning the problem ticket to a tier 1 personnel);

routing the problem ticket to the first support person **(see at least Page 8 ¶ 110;**

Page 9 ¶ 138, 139; Page 10 ¶ 142 wherein the problem ticket is routed to a first

support person in Tier 1);

searching for a second customer support level, and the information about the

customer, wherein said searching yields a second support person of the second support

level, wherein the second customer support level corresponds to a greater amount of

one or more of skills, knowledge, and experience **(Page 5 ¶ 78; Page 6 ¶ 94, 95; Page**

7 ¶ 107; Page 8 ¶ 110; Page 9 ¶ 138, 139; Page 10 ¶ 142 wherein in the event that

the first tier support personnel is unable to resolve the problem ticket a second

personnel in a second (or third) tier, who has a greater amount of skill,

knowledge, and/or experience, is determined and assigned the problem ticket);

and

routing the problem ticket to the second support person when the first support

person fails to resolve the problem **(see at least Page 8 ¶ 110; Page 9 ¶ 138, 139;**

Page 10 ¶ 142 wherein the problem ticket is routed to a second support person in

tier 2/3 if the previous tier, e.g. tier 1, is unable to resolve the problem).

Riley teaches a multi-tier support system that categorizes and prioritizes problem

tickets and determines the appropriate personnel from a specific tier level for the

problem ticket. **Riley** further discloses that the system includes an automatic call

distribution to allow for the routing of problem tickets to the appropriate personnel, which

is based on the nature and problem of the ticket and the skill level, knowledge, and/or

experience of the personnel. Although **Riley** discloses that this is being performed

automatically and that personnel are notified electronically of the problem tickets, **Riley**

does not explicitly disclose a customer support personnel database that allows for the

searching of the personnel.

To be more specific, **Riley** fails to explicitly disclose:

searching a set of one or more ***customer support personnel databases*** based,

at least in part, on the problem, a first customer support level, and the information about

the customer, wherein said searching yields a first support person of the first customer

support level;

searching the set of one or more ***customer support personnel databases***

based, at least in part, on the problem, a second customer support level, and the

information about the customer, wherein said searching yields a second support person

of the second support level, wherein the second customer support level corresponds to

a greater amount of one or more of skills, knowledge, and experience.

However, the Examiner asserts that one of ordinary skill in the art looking upon

the teachings of **Riley** would have found that the routing process, i.e. call distribution, is

being performed automatically **(Page 5 ¶ 78)** and that the system automatically notifies

personnel electronically regarding a problem ticket **(Page 9 ¶ 137)**. With that said, the

Examiner asserts that it would have been obvious to one of ordinary skill in the art that

Riley must use some type of customer support personnel database in order to allow the

system to automatically search, distribute, and notify personnel of identified problem

tickets. That is to say, it would have been obvious for **Riley** to have a database that includes information about support personnel so that the system can properly perform a look up process to determine which of the plurality of personnel from the various tiers would be assigned the problem ticket as well as providing contact information in order to notify the support personnel of a problem ticket that has been assigned to them.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for **Riley** to include a customer support personnel database so that the system would be able to automatically route, assign, and notify support personnel of problem tickets and to ensure that the problem tickets are being correctly assigned.

10.   In regards to **claim 2**, **Riley** discloses wherein said searching the set of one or more customer support personnel databases based, at least in part, on the problem, the first customer support level, and the information about the customer further comprises also searching a dynamic social network database based, at least in part, on the problem and the information about the customer **(Page 5 ¶ 71 – 75, 78; Page 6 ¶ 94, 95; Page 7 ¶ 107; Page 8 ¶ 110; Page 9 ¶ 137, 138, 139; Page 10 ¶ 142; Page 11 ¶ 154, 155; Page 12 ¶ 185, 186 as discussed above, it would have been obvious that a database(s) is included in the system in order to store personnel information for the distribution and assignment of problem tickets. In addition to this, Riley further discloses that problem tickets are logged into the system and includes information pertaining to the service provided in to resolve the problem ticket and that quality review is performed in order to determine whether the quality of**

service was satisfactory, which includes the quality of service provided by the

support personnel, and is later used as a to obviously determine where

improvements can be made and if the support personnel meets the required skill

level for their assigned tier.

As a result, it would have been obvious to one of ordinary skill in the art

that Riley also discloses a dynamic social network database, or its equivalent,

which is based on data collected about a service request and the personnel

handling the personnel request, and that this information used in order to

determine if the support personnel is able to perform the necessary tasks for

their assigned tier.).

11.   In regards to **claim 3, Riley** discloses wherein said searching the dynamic social

network database is also based on information about the first support person **(see at**

least Page 11 ¶ 154 – 172 wherein ¶ 157 – 171 are examples of the types of

questions about the service that was provided by the support personnel).

12.   In regards to **claim 4, Riley** discloses further comprising searching the set of one

or more databases and the dynamic social network database based, at least in part on

the problem, the first customer support level, and the information about the customer

when the first support person fails to resolve the problem, wherein said searching yields

a second support person of the first customer support level **(Page 5 ¶ 71 – 75, 78; Page**

6 ¶ 94, 95; Page 7 ¶ 107; Page 8 ¶ 110; Page 9 ¶ 137, 138, 139; Page 10 ¶ 142; Page

11 ¶ 154, 155; Page 12 ¶ 185, 186 wherein in the event that the first tier support

personnel is unable to resolve the problem ticket a second personnel in a second

(or third) tier, who has a greater amount of skill, knowledge, and/or experience, is determined and assigned the problem ticket.

Additionally, and as discussed above, it would have been obvious that a database(s) is included in the system in order to store personnel information for the distribution and assignment of problem tickets. In addition to this, Riley further discloses that problem tickets are logged into the system and includes information pertaining to the service provided in to resolve the problem ticket and that quality review is performed in order to determine whether the quality of service was satisfactory, which includes the quality of service provided by the support personnel, and is later used as a to obviously determine where improvements can be made and if the support personnel meets the required skill level for their assigned tier.

As a result, it would have been obvious to one of ordinary skill in the art that Riley also discloses a dynamic social network database, or its equivalent, which is based on data collected about a service request and the personnel handling the personnel request, and that this information used in order to determine if the support personnel is able to perform the necessary tasks for their assigned tier.).

13.   In regards to **claim 5**, **Riley** discloses wherein the customer support personnel databases comprise any one or more of a personnel experience database, a personnel knowledge and skill set database, a personnel location database, a personnel success rate database, and a personnel availability database **(Page 5 ¶ 71 – 75, 78; Page 6 ¶**

94, 95; Page 7 ¶ 107; Page 8 ¶ 110; Page 9 ¶ 137, 138, 139; Page 10 ¶ 142; Page 11

¶ 154, 155; Page 12 ¶ 185, 186 wherein in the event that the first tier support

personnel is unable to resolve the problem ticket a second personnel in a second

(or third) tier, who has a greater amount of skill, knowledge, and/or experience, is

determined and assigned the problem ticket and wherein support personnel are

evaluated on their performance towards resolving a problem ticket. See also the

discussion for claim 1 regarding the support personnel database.).

14.   In regards to **claim 6**, **Riley** discloses wherein information in the dynamic social

network database comprises personnel language, interests, one or more collaborating

colleagues, number of chat conversations initiated, and number of emails exchanged

(Page 5 ¶ 71 – 75, 78; Page 6 ¶ 94, 95; Page 7 ¶ 107; Page 8 ¶ 110; Page 9 ¶ 137,

138, 139; Page 10 ¶ 142; Page 11 ¶ 154, 155, 173 – 175; Page 12 ¶ 176 – 186 as

discussed above, it would have been obvious that a database(s) is included in the

system in order to store personnel information for the distribution and

assignment of problem tickets. In addition to this, Riley further discloses that

problem tickets are logged into the system and includes information pertaining to

the service provided in to resolve the problem ticket and that quality review is

performed in order to determine whether the quality of service was satisfactory,

which includes the quality of service provided by the support personnel, and is

later used as a to obviously determine where improvements can be made and if

the support personnel meets the required skill level for their assigned tier.

In addition to asking questions about the support personnel's ability to resolve the problem ticket, Riley also discloses that other factors are analyzed in order to determine the quality of service that is being provided. For example, Riley discloses that an analysis is performed in order to determine the percentage rate of problem tickets that were successfully resolved, abandonment rates, wait time, request handling rate, complaints, and etc. Moreover, because the problem tickets are being handled over the phone and because the calls can be routed to other support personnel it would have been obvious to include the personnel language (in order to ensure that the personnel can communicate with the caller), contact information of other colleagues, and etc.).

15.   In regards to **claim 7**, **Riley** discloses a method comprising:

determining a problem ticket for a customer, wherein the problem ticket indicates a problem and information about the customer **(Page 2 ¶ 29; Page 4 ¶ 57; Page 5 ¶ 79; Page 6 ¶ 94; Page 7 ¶ 98, 105, 107, 109 wherein a problem ticket is determined for a customer and includes information about the problem and the customer)**;

searching for a first customer support level, and the information about the customer, wherein said searching yields a plurality of support persons of the first customer support level **(Page 5 ¶ 78; Page 6 ¶ 94, 95; Page 7 ¶ 107; Page 8 ¶ 110; Page 9 ¶ 138, 139; Page 10 ¶ 142 wherein a problem ticket is categorized and prioritized for assignment to the appropriate support person in the appropriate tier, e.g. initially assigning the problem ticket to a tier 1 personnel)**; and

routing the problem ticket to the first of the plurality of support persons **(see at least Page 8 ¶ 110; Page 9 ¶ 138, 139; Page 10 ¶ 142 wherein the problem ticket is routed to a first support person in Tier 1)**.

Riley teaches a multi-tier support system that categorizes and prioritizes problem tickets and determines the appropriate personnel from a specific tier level for the problem ticket. **Riley** further discloses that the system includes an automatic call distribution to allow for the routing of problem tickets to the appropriate personnel, which is based on the nature and problem of the ticket and the skill level, knowledge, and/or experience of the personnel. Although **Riley** discloses that this is being performed automatically and that personnel are notified electronically of the problem tickets, **Riley** does not explicitly disclose a customer support personnel database that allows for the searching of the personnel.

To be more specific, **Riley** fails to explicitly disclose:

searching a set of one or more ***customer support personnel databases*** based, at least in part, on the problem, a first customer support level, and the information about the customer, wherein said searching yields a plurality of support person of the first customer support level.

However, the Examiner asserts that one of ordinary skill in the art looking upon the teachings of **Riley** would have found that the routing process, i.e. call distribution, is being performed automatically **(Page 5 ¶ 78)** and that the system automatically notifies personnel electronically regarding a problem ticket **(Page 9 ¶ 137)**. With that said, the Examiner asserts that it would have been obvious to one of ordinary skill in the art that

Riley must use some type of customer support personnel database in order to allow the system to automatically search, distribute, and notify personnel of identified problem tickets. That is to say, it would have been obvious for **Riley** to have a database that includes information about support personnel so that the system can properly perform a look up process to determine which of the plurality of personnel from the various tiers would be assigned the problem ticket as well as providing contact information in order to notify the support personnel of a problem ticket that has been assigned to them.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for **Riley** to include a customer support personnel database so that the system would be able to automatically route, assign, and notify support personnel of problem tickets and to ensure that the problem tickets are being correctly assigned.

In regards to:

searching a dynamic social network database based, at least in part on the information about the customer, the problem, and indications of the plurality of support persons of the first customer support level, wherein said searching yields a first of the plurality of support persons;

the Examiner asserts that this is obviously included. As discussed above, it would have been obvious that a database(s) is included in the system in order to store personnel information for the distribution and assignment of problem tickets, as well as providing information to allow the system to reassign a problem ticket to another support personnel of the same tier or a higher tier. In addition to this, Riley further discloses that

problem tickets are logged into the system and includes information pertaining to the

service provided in to resolve the problem ticket and that quality review is performed in

order to determine whether the quality of service was satisfactory, which includes the

quality of service provided by the support personnel, and is later used as a to obviously

determine where improvements can be made and if the support personnel meets the

required skill level for their assigned tier **(Page 5 ¶ 71 – 75, 78; Page 6 ¶ 94, 95; Page**

7 ¶ 107; Page 8 ¶ 110; Page 9 ¶ 137, 138, 139; Page 10 ¶ 142; Page 11 ¶ 154, 155;

Page 12 ¶ 185, 186).

Therefore, it would have been obvious to one of ordinary skill in the art that Riley

also discloses a dynamic social network database, or its equivalent, which is based on

data collected about a service request and the personnel handling the personnel

request, and that this information used in order to determine if the support personnel is

able to perform the necessary tasks for their assigned tier.

16.   In regards to **claim 8**, **Riley** discloses further comprising:

determining that the first of the plurality of support persons resolved the problem

(Page 5 ¶ 71 – 75, 78; Page 6 ¶ 94, 95; Page 8 ¶ 110; Page 9 ¶ 137 – 139; Page 10 ¶

142 wherein a plurality of support persons at various different tiers are provided

and the system automatically routes, assigns, and notifies the appropriate

support personnel for resolving the problem ticket); and

updating both the dynamic social network database and at least one of the set of

customer support personnel databases to reflect the first of the plurality of support

persons resolving the problem **(Page 10 ¶ 148; Page 11 – 12 ¶ 154 – 186 (wherein ¶**

157 – 171, 174 – 184 are the various metrics that are analyzed for determining the quality of the service that was provided by the support personnel); Page 15 ¶ 239 wherein any information about a service request, including solutions, common trends, information about the support personnel's ability to resolve an issue, is updated and analyzed as what one of ordinary skill in the art of customer service would have found obvious to be a continued effort to increase the reliability and service quality of resolving service requests).

17.   In regards to **claim 9, Riley** discloses wherein the determining that the first of the plurality of support persons resolved the problem comprises one or more of detecting that the customer has disconnected a phone call and detecting that the customer has logged off a chat window **(see at least Page 2 ¶ 32, 33; Page 3 ¶ 50; Page 4 ¶ 56; Page 12 ¶ 173 – 182 wherein the quantity of resolved problems is determined and is comprised of determining the amount of disconnected phone calls by the customer).**

18.   In regards to **claim 10, Riley** discloses wherein the first of the plurality of support persons shares, with the customer, any one of a common language, common cultural background, common interests, and common location **(Page 4 ¶ 57 the system supports telephone communication between the customer and the support personnel. As a result, it would have been obvious that the customer and the support personnel would share, at least, a common language so that they will understand each other.).**

19.   In regards to **claim 11**, **Riley** discloses one or more machine-readable media

having stored therein a program product, which when executed a set of one or more

processors causes the set of one or more processors to perform operations that

comprise:

determining a problem ticket for a customer, wherein the problem ticket indicates

a problem and information about the customer **(Page 2 ¶ 29; Page 4 ¶ 57; Page 5 ¶ 79;**

Page 6 ¶ 94; Page 7 ¶ 98, 105, 107, 109 wherein a problem ticket is determined for

a customer and includes information about the problem and the customer);

searching for a first customer support level, and the information about the

customer, wherein said searching yields a first support person of the first customer

support level **(Page 5 ¶ 78; Page 6 ¶ 94, 95; Page 7 ¶ 107; Page 8 ¶ 110; Page 9 ¶**

138, 139; Page 10 ¶ 142 wherein a problem ticket is categorized and prioritized for

assignment to the appropriate support person in the appropriate tier, e.g. initially

assigning the problem ticket to a tier 1 personnel);

routing the problem ticket to the first support person **(see at least Page 8 ¶ 110;**

Page 9 ¶ 138, 139; Page 10 ¶ 142 wherein the problem ticket is routed to a first

support person in Tier 1);

searching for a second customer support level, and the information about the

customer, wherein said searching yields a second support person of the second support

level, wherein the second customer support level corresponds to a greater amount of

one or more of skills, knowledge, and experience **(Page 5 ¶ 78; Page 6 ¶ 94, 95; Page**

7 ¶ 107; Page 8 ¶ 110; Page 9 ¶ 138, 139; Page 10 ¶ 142 wherein in the event that

the first tier support personnel is unable to resolve the problem ticket a second

personnel in a second (or third) tier, who has a greater amount of skill,

knowledge, and/or experience, is determined and assigned the problem ticket);

and

routing the problem ticket to the second support person when the first support

person fails to resolve the problem **(see at least Page 8 ¶ 110; Page 9 ¶ 138, 139;**

Page 10 ¶ 142 wherein the problem ticket is routed to a second support person in

tier 2/3 if the previous tier, e.g. tier 1, is unable to resolve the problem).

Riley teaches a multi-tier support system that categorizes and prioritizes problem

tickets and determines the appropriate personnel from a specific tier level for the

problem ticket. **Riley** further discloses that the system includes an automatic call

distribution to allow for the routing of problem tickets to the appropriate personnel, which

is based on the nature and problem of the ticket and the skill level, knowledge, and/or

experience of the personnel. Although **Riley** discloses that this is being performed

automatically and that personnel are notified electronically of the problem tickets, **Riley**

does not explicitly disclose a customer support personnel database that allows for the

searching of the personnel.

To be more specific, **Riley** fails to explicitly disclose:

searching a set of one or more **customer support personnel databases** based,

at least in part, on the problem, a first customer support level, and the information about

the customer, wherein said searching yields a first support person of the first customer

support level;

searching the set of one or more *customer support personnel databases*

based, at least in part, on the problem, a second customer support level, and the

information about the customer, wherein said searching yields a second support person

of the second support level, wherein the second customer support level corresponds to

a greater amount of one or more of skills, knowledge, and experience.

However, the Examiner asserts that one of ordinary skill in the art looking upon

the teachings of **Riley** would have found that the routing process, i.e. call distribution, is

being performed automatically **(Page 5 ¶ 78)** and that the system automatically notifies

personnel electronically regarding a problem ticket **(Page 9 ¶ 137)**. With that said, the

Examiner asserts that it would have been obvious to one of ordinary skill in the art that

Riley must use some type of customer support personnel database in order to allow the

system to automatically search, distribute, and notify personnel of identified problem

tickets. That is to say, it would have been obvious for **Riley** to have a database that

includes information about support personnel so that the system can properly perform a

look up process to determine which of the plurality of personnel from the various tiers

would be assigned the problem ticket as well as providing contact information in order to

notify the support personnel of a problem ticket that has been assigned to them.

Therefore, it would have been obvious to one having ordinary skill in the art at

the time of the invention for **Riley** to include a customer support personnel database so

that the system would be able to automatically route, assign, and notify support

personnel of problem tickets and to ensure that the problem tickets are being correctly

assigned.

20.   In regards to **claim 12**, **Riley** discloses wherein said operation of searching the set of one or more customer support personnel databases based, at least in part, on the problem, the first customer support level, and the information about the customer further comprises searching a dynamic social network database based, at least in part, on the problem and the information about the customer **(Page 5 ¶ 71 – 75, 78; Page 6 ¶ 94, 95; Page 7 ¶ 107; Page 8 ¶ 110; Page 9 ¶ 137, 138, 139; Page 10 ¶ 142; Page 11 ¶ 154, 155; Page 12 ¶ 185, 186 as discussed above, it would have been obvious that a database(s) is included in the system in order to store personnel information for the distribution and assignment of problem tickets. In addition to this, Riley further discloses that problem tickets are logged into the system and includes information pertaining to the service provided in to resolve the problem ticket and that quality review is performed in order to determine whether the quality of service was satisfactory, which includes the quality of service provided by the support personnel, and is later used as a to obviously determine where improvements can be made and if the support personnel meets the required skill level for their assigned tier.**

As a result, it would have been obvious to one of ordinary skill in the art that Riley also discloses a dynamic social network database, or its equivalent, which is based on data collected about a service request and the personnel handling the personnel request, and that this information used in order to determine if the support personnel is able to perform the necessary tasks for their assigned tier.).

21.   In regards to **claim 13**, **Riley** discloses wherein said operation of searching the

dynamic social network database is also based on information about the first support

person **(see at least Page 11 ¶ 154 – 172 wherein ¶ 157 – 171 are examples of the**

types of questions about the service that was provided by the support

personnel).

22.   In regards to **claim 14**, **Riley** discloses wherein the operations further comprise

searching the set of one or more databases and the dynamic social network database

based, at least in part on the problem, the first customer support level, and the

information about the customer when the first support person fails to resolve the

problem, wherein said searching yields a second support person of the first customer

support level **(Page 5 ¶ 71 – 75, 78; Page 6 ¶ 94, 95; Page 7 ¶ 107; Page 8 ¶ 110;**

Page 9 ¶ 137, 138, 139; Page 10 ¶ 142; Page 11 ¶ 154, 155; Page 12 ¶ 185, 186

wherein in the event that the first tier support personnel is unable to resolve the

problem ticket a second personnel in a second (or third) tier, who has a greater

amount of skill, knowledge, and/or experience, is determined and assigned the

problem ticket.

        Additionally, and as discussed above, it would have been obvious that a

database(s) is included in the system in order to store personnel information for

the distribution and assignment of problem tickets. In addition to this, Riley

further discloses that problem tickets are logged into the system and includes

information pertaining to the service provided in to resolve the problem ticket and

that quality review is performed in order to determine whether the quality of

service was satisfactory, which includes the quality of service provided by the

support personnel, and is later used as a to obviously determine where

improvements can be made and if the support personnel meets the required skill

level for their assigned tier.

As a result, it would have been obvious to one of ordinary skill in the art

that Riley also discloses a dynamic social network database, or its equivalent,

which is based on data collected about a service request and the personnel

handling the personnel request, and that this information used in order to

determine if the support personnel is able to perform the necessary tasks for

their assigned tier.).

23.   In regards to **claim 15**, **Riley** discloses wherein the customer support personnel

databases comprise any one or more of a personnel experience database, a personnel

knowledge and skill set database, a personnel location database, a personnel success

rate database, and a personnel availability database **(Page 5 ¶ 71 – 75, 78; Page 6 ¶**

94, 95; Page 7 ¶ 107; Page 8 ¶ 110; Page 9 ¶ 137, 138, 139; Page 10 ¶ 142; Page 11

¶ 154, 155; Page 12 ¶ 185, 186 wherein in the event that the first tier support

personnel is unable to resolve the problem ticket a second personnel in a second

(or third) tier, who has a greater amount of skill, knowledge, and/or experience, is

determined and assigned the problem ticket and wherein support personnel are

evaluated on their performance towards resolving a problem ticket. See also the

discussion for claim 1 regarding the support personnel database.).

24.   In regards to **claim 16**, **Riley** discloses wherein information in the dynamic social network database comprises personnel language, interests, one or more collaborating colleagues, number of chat conversations initiated, and number of emails exchanged **(Page 5 ¶ 71 – 75, 78; Page 6 ¶ 94, 95; Page 7 ¶ 107; Page 8 ¶ 110; Page 9 ¶ 137, 138, 139; Page 10 ¶ 142; Page 11 ¶ 154, 155, 173 – 175; Page 12 ¶ 176 – 186 as discussed above, it would have been obvious that a database(s) is included in the system in order to store personnel information for the distribution and assignment of problem tickets. In addition to this, Riley further discloses that problem tickets are logged into the system and includes information pertaining to the service provided in to resolve the problem ticket and that quality review is performed in order to determine whether the quality of service was satisfactory, which includes the quality of service provided by the support personnel, and is later used as a to obviously determine where improvements can be made and if the support personnel meets the required skill level for their assigned tier.**

In addition to asking questions about the support personnel's ability to resolve the problem ticket, Riley also discloses that other factors are analyzed in order to determine the quality of service that is being provided. For example, Riley discloses that an analysis is performed in order to determine the percentage rate of problem tickets that were successfully resolved, abandonment rates, wait time, request handling rate, complaints, and etc. Moreover, because the problem tickets are being handled over the phone and because the calls can be routed to other support personnel it would have been obvious to include the

personnel language (in order to ensure that the personnel can communicate with the caller), contact information of other colleagues, and etc.).

25.   In regards to **claim 17**, **Riley** discloses one or more machine-readable media, wherein the operations comprise:

determining a problem ticket for a customer, wherein the problem ticket indicates a problem and information about the customer **(Page 2 ¶ 29; Page 4 ¶ 57; Page 5 ¶ 79; Page 6 ¶ 94; Page 7 ¶ 98, 105, 107, 109 wherein a problem ticket is determined for a customer and includes information about the problem and the customer)**;

searching for a first customer support level, and the information about the customer, wherein said searching yields a plurality of support persons of the first customer support level **(Page 5 ¶ 78; Page 6 ¶ 94, 95; Page 7 ¶ 107; Page 8 ¶ 110; Page 9 ¶ 138, 139; Page 10 ¶ 142 wherein a problem ticket is categorized and prioritized for assignment to the appropriate support person in the appropriate tier, e.g. initially assigning the problem ticket to a tier 1 personnel)**; and

routing the problem ticket to the first of the plurality of support persons **(see at least Page 8 ¶ 110; Page 9 ¶ 138, 139; Page 10 ¶ 142 wherein the problem ticket is routed to a first support person in Tier 1).**

Riley teaches a multi-tier support system that categorizes and prioritizes problem tickets and determines the appropriate personnel from a specific tier level for the problem ticket. **Riley** further discloses that the system includes an automatic call distribution to allow for the routing of problem tickets to the appropriate personnel, which is based on the nature and problem of the ticket and the skill level, knowledge, and/or

experience of the personnel. Although **Riley** discloses that this is being performed

automatically and that personnel are notified electronically of the problem tickets, **Riley**

does not explicitly disclose a customer support personnel database that allows for the

searching of the personnel.

To be more specific, **Riley** fails to explicitly disclose:

searching a set of one or more ***customer support personnel databases*** based,

at least in part, on the problem, a first customer support level, and the information about

the customer, wherein said searching yields a plurality of support persons of the first

customer support level.

However, the Examiner asserts that one of ordinary skill in the art looking upon

the teachings of **Riley** would have found that the routing process, i.e. call distribution, is

being performed automatically **(Page 5 ¶ 78)** and that the system automatically notifies

personnel electronically regarding a problem ticket **(Page 9 ¶ 137)**. With that said, the

Examiner asserts that it would have been obvious to one of ordinary skill in the art that

Riley must use some type of customer support personnel database in order to allow the

system to automatically search, distribute, and notify personnel of identified problem

tickets. That is to say, it would have been obvious for **Riley** to have a database that

includes information about support personnel so that the system can properly perform a

look up process to determine which of the plurality of personnel from the various tiers

would be assigned the problem ticket as well as providing contact information in order to

notify the support personnel of a problem ticket that has been assigned to them.

Therefore, it would have been obvious to one having ordinary skill in the art at

the time of the invention for **Riley** to include a customer support personnel database so

that the system would be able to automatically route, assign, and notify support

personnel of problem tickets and to ensure that the problem tickets are being correctly

assigned.

In regards to:

searching a dynamic social network database based, at least in part on the

information about the customer, the problem, and indications of the plurality of support

persons of the first customer support level, wherein said searching yields a first of the

plurality of support persons

the Examiner asserts that this is obviously included. As discussed above, it

would have been obvious that a database(s) is included in the system in order to store

personnel information for the distribution and assignment of problem tickets, as well as

providing information to allow the system to reassign a problem ticket to another support

personnel of the same tier or a higher tier. In addition to this, Riley further discloses that

problem tickets are logged into the system and includes information pertaining to the

service provided in to resolve the problem ticket and that quality review is performed in

order to determine whether the quality of service was satisfactory, which includes the

quality of service provided by the support personnel, and is later used as a to obviously

determine where improvements can be made and if the support personnel meets the

required skill level for their assigned tier **(Page 5 ¶ 71 – 75, 78; Page 6 ¶ 94, 95; Page**

7 ¶ 107; Page 8 ¶ 110; Page 9 ¶ 137, 138, 139; Page 10 ¶ 142; Page 11 ¶ 154, 155;

Page 12 ¶ 185, 186).

Therefore, it would have been obvious to one of ordinary skill in the art that Riley

also discloses a dynamic social network database, or its equivalent, which is based on

data collected about a service request and the personnel handling the personnel

request, and that this information used in order to determine if the support personnel is

able to perform the necessary tasks for their assigned tier.

26.   In regards to **claim 18**, **Riley** discloses wherein the operations also comprise:

determining that the first of the plurality of support persons resolved the problem

(Page 5 ¶ 71 – 75, 78; Page 6 ¶ 94, 95; Page 8 ¶ 110; Page 9 ¶ 137 – 139; Page 10 ¶

142 wherein a plurality of support persons at various different tiers are provided

and the system automatically routes, assigns, and notifies the appropriate

support personnel for resolving the problem ticket); and

updating both the dynamic social network database and at least one of the set of

customer support personnel databases to reflect the first of the plurality of support

persons resolving the problem **(Page 10 ¶ 148; Page 11 – 12 ¶ 154 – 186 (wherein ¶**

157 – 171, 174 – 184 are the various metrics that are analyzed for determining the

quality of the service that was provided by the support personnel); Page 15 ¶ 239

wherein any information about a service request, including solutions, common

trends, information about the support personnel's ability to resolve an issue, is

updated and analyzed as what one of ordinary skill in the art of customer service

would have found obvious to be a continued effort to increase the reliability and

service quality of resolving service requests).

27.   In regards to **claim 19**, **Riley** discloses wherein said operation of determining

that the first of the plurality of support persons resolved the problem comprises one or

more of detecting that the customer has disconnected a phone call and detecting that

the customer has logged off a chat window **(see at least Page 2 ¶ 32, 33; Page 3 ¶ 50;**

Page 4 ¶ 56; Page 12 ¶ 173 – 182 wherein the quantity of resolved problems is

determined and is comprised of determining the amount of disconnected phone

calls by the customer).

28.   In regards to **claim 20**, **Riley** discloses wherein the first of the plurality of support

persons shares, with the customer, any one of a common language, common cultural

background, common interests, and common location **(Page 4 ¶ 57 the system**

supports telephone communication between the customer and the support

personnel. As a result, it would have been obvious that the customer and the

support personnel would share, at least, a common language so that they will

understand each other.).

29.   In regards to **claim 21**, **Riley** discloses an apparatus comprising:

        a set of one or more processors **(Page 2 ¶ 33 wherein the method is**

performed over a computer network);

        a memory unit coupled with the set of one or more processors **(Page 2 ¶ 33**

wherein the software, Service Desk, is used over a computer network, which

include a database and memory storage device); and

an automated resource selection and allocation engine operable to **(see at least Page 2 ¶ 32; Page 5 ¶ 78 wherein software application for resolving the service request and automatic call distribution and call menu system is provided for routing service requests to the appropriate support personnel)**:

determine a problem ticket for a customer, wherein the problem ticket indicates a problem and information about the customer **(Page 2 ¶ 29; Page 4 ¶ 57; Page 5 ¶ 79; Page 6 ¶ 94; Page 7 ¶ 98, 105, 107, 109 wherein a problem ticket is determined for a customer and includes information about the problem and the customer)**;

search for a first customer support level, and the information about the customer, wherein the search yields a first support person of the first customer support level **(Page 5 ¶ 78; Page 6 ¶ 94, 95; Page 7 ¶ 107; Page 8 ¶ 110; Page 9 ¶ 138, 139; Page 10 ¶ 142 wherein a problem ticket is categorized and prioritized for assignment to the appropriate support person in the appropriate tier, e.g. initially assigning the problem ticket to a tier 1 personnel)**;

route the problem ticket to the first support person **(see at least Page 8 ¶ 110; Page 9 ¶ 138, 139; Page 10 ¶ 142 wherein the problem ticket is routed to a first support person in Tier 1)**;

search for a second customer support level, and the information about the customer, wherein the search yields a second support person of the second support level, wherein the second customer support level corresponds to a

greater amount of one or more of skills, knowledge, and experience **(see at least Page 8 ¶ 110; Page 9 ¶ 138, 139; Page 10 ¶ 142 wherein the problem ticket is routed to a first support person in Tier 1)**; and

route the problem ticket to the second support person when the first support person fails to resolve the problem **(see at least Page 8 ¶ 110; Page 9 ¶ 138, 139; Page 10 ¶ 142 wherein the problem ticket is routed to a second support person in tier 2/3 if the previous tier, e.g. tier 1, is unable to resolve the problem)**.

Riley teaches a multi-tier support system that categorizes and prioritizes problem tickets and determines the appropriate personnel from a specific tier level for the problem ticket. **Riley** further discloses that the system includes an automatic call distribution to allow for the routing of problem tickets to the appropriate personnel, which is based on the nature and problem of the ticket and the skill level, knowledge, and/or experience of the personnel. Although **Riley** discloses that this is being performed automatically and that personnel are notified electronically of the problem tickets, **Riley** does not explicitly disclose a customer support personnel database that allows for the searching of the personnel.

To be more specific, **Riley** fails to explicitly disclose:

searching a set of one or more ***customer support personnel databases*** based, at least in part, on the problem, a first customer support level, and the information about the customer, wherein said searching yields a first support person of the first customer support level;

searching the set of one or more *customer support personnel databases* based, at least in part, on the problem, a second customer support level, and the information about the customer, wherein said searching yields a second support person of the second support level, wherein the second customer support level corresponds to a greater amount of one or more of skills, knowledge, and experience.

However, the Examiner asserts that one of ordinary skill in the art looking upon the teachings of **Riley** would have found that the routing process, i.e. call distribution, is being performed automatically **(Page 5 ¶ 78)** and that the system automatically notifies personnel electronically regarding a problem ticket **(Page 9 ¶ 137)**. With that said, the Examiner asserts that it would have been obvious to one of ordinary skill in the art that **Riley** must use some type of customer support personnel database in order to allow the system to automatically search, distribute, and notify personnel of identified problem tickets. That is to say, it would have been obvious for **Riley** to have a database that includes information about support personnel so that the system can properly perform a look up process to determine which of the plurality of personnel from the various tiers would be assigned the problem ticket as well as providing contact information in order to notify the support personnel of a problem ticket that has been assigned to them.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for **Riley** to include a customer support personnel database so that the system would be able to automatically route, assign, and notify support personnel of problem tickets and to ensure that the problem tickets are being correctly assigned.

30.   In regards to **claim 22**, **Riley** discloses wherein the automated resource
selection and allocation unit being operable to search the set of one or more customer
support personnel databases based, at least in part, on the problem, the first customer
support level, and the information about the customer further comprises the automated
resource selection and allocation engine being operable to search a dynamic social
network database based, at least in part, on the problem and the information about the
customer **(Page 5 ¶ 71 – 75, 78; Page 6 ¶ 94, 95; Page 7 ¶ 107; Page 8 ¶ 110; Page 9
¶ 137, 138, 139; Page 10 ¶ 142; Page 11 ¶ 154, 155; Page 12 ¶ 185, 186 as
discussed above, it would have been obvious that a database(s) is included in the
system in order to store personnel information for the distribution and
assignment of problem tickets. In addition to this, Riley further discloses that
problem tickets are logged into the system and includes information pertaining to
the service provided in to resolve the problem ticket and that quality review is
performed in order to determine whether the quality of service was satisfactory,
which includes the quality of service provided by the support personnel, and is
later used as a to obviously determine where improvements can be made and if
the support personnel meets the required skill level for their assigned tier.**

    **As a result, it would have been obvious to one of ordinary skill in the art
that Riley also discloses a dynamic social network database, or its equivalent,
which is based on data collected about a service request and the personnel
handling the personnel request, and that this information used in order to**

determine if the support personnel is able to perform the necessary tasks for their assigned tier.).

31.   In regards to **claim 23**, **Riley** discloses further comprises the automated resource selection and allocation engine being operable to search the set of one or more databases and the dynamic social network database based, at least in part on the problem, the first customer support level, and the information about the customer when the first support person fails to resolve the problem, wherein the search yields a second support person of the first customer support level **(Page 5 ¶ 71 – 75, 78; Page 6 ¶ 94, 95; Page 7 ¶ 107; Page 8 ¶ 110; Page 9 ¶ 137, 138, 139; Page 10 ¶ 142; Page 11 ¶ 154, 155; Page 12 ¶ 185, 186 wherein in the event that the first tier support personnel is unable to resolve the problem ticket a second personnel in a second (or third) tier, who has a greater amount of skill, knowledge, and/or experience, is determined and assigned the problem ticket.**

Additionally, and as discussed above, it would have been obvious that a database(s) is included in the system in order to store personnel information for the distribution and assignment of problem tickets. In addition to this, Riley further discloses that problem tickets are logged into the system and includes information pertaining to the service provided in to resolve the problem ticket and that quality review is performed in order to determine whether the quality of service was satisfactory, which includes the quality of service provided by the support personnel, and is later used as a to obviously determine where

improvements can be made and if the support personnel meets the required skill level for their assigned tier.

As a result, it would have been obvious to one of ordinary skill in the art that Riley also discloses a dynamic social network database, or its equivalent, which is based on data collected about a service request and the personnel handling the personnel request, and that this information used in order to determine if the support personnel is able to perform the necessary tasks for their assigned tier).

32.   In regards to **claim 24, Riley** discloses further comprising: a data collection and analysis engine operable to dynamically update a dynamic social network database based on any one or more of interactions between support personnel, the customers, interactions between the customers and the support personnel, and problem resolution **(Page 10 ¶ 148; Page 11 – 12 ¶ 154 – 186 (wherein ¶ 157 – 171, 174 – 184 are the various metrics that are analyzed for determining the quality of the service that was provided by the support personnel); Page 15 ¶ 239 wherein any information about a service request, including solutions, common trends, information about the support personnel's ability to resolve an issue, is updated and analyzed as what one of ordinary skill in the art of customer service would have found obvious to be a continued effort to increase the reliability and service quality of resolving service requests).**

33.   In regards to **claim 25, Riley** discloses wherein the automated resource selection and allocation engine comprises one or more machine-readable media **(see at**

least Page 2 ¶ 32; Page 5 ¶ 78 wherein software application for resolving the

service request and automatic call distribution and call menu system is utilized in

a computer network).

Conclusion

34.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure can be found in the PTO-892 Notice of References Cited.

>   **Wakamoto et al. (US Patent 5,107,500); Bushey et al. (US Patent**

>   **6,389,400 B1); Lee (US Patent 6,542,897 B2); Sullivan et al. (US Patent**

>   **6,615,240 B1); Busey et al. (US Patent 6,665,395 B1); Bernier (US**

>   **PGPub 2007/0041562 A1); Joseph et al. (US Patent 7,349,534 B2);**

>   **Gusler et al. (US Patent 6,973,620 B2)** - which are directed towards

>   customer service systems implementing a routing system in order to direct

>   the customer to a customer service representative

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to GERARDO ARAQUE JR whose telephone number is

(571)272-3747. The examiner can normally be reached on Monday - Friday 9:30AM -

5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Janice Mooneyham can be reached on (571) 272-6805. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gerardo Araque Jr./
Primary Examiner, Art Unit 3689
July 1, 2011

REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on 07/08/2011, and the references cited therewith.

Claims 1, 2, 6, 7, 9, and 11 – 22 are amended. As a result, claims 1 – 25 remain pending in this application.

§101 Rejection of the Claims

Claims 1 – 10 are rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. Independent claims 1 and 7 have been amended to recite an electronic device. Applicant submits that claims 1 and 7 and consequently their dependent claims 2 – 6 and 8 – 10 are now directed to statutory subject matter. Applicant respectfully requests that the 35 U.S.C. §101 rejections of claims 1 – 10 be withdrawn.

Claims 11 – 20 are rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. The specification has been amended to distinguish between machine-readable storage media and machine-readable signal medium. The distinction is supported by the originally filed specification, and no new matter has been added. The machine-readable storage medium does not encompass a propagated signal or energy. The machine-readable signal medium encompasses a propagated signal or energy. The claims have been amended to limit the claims to a machine-readable storage medium. Applicant's representative respectfully requests that the 35 U.S.C. §101 rejections of claims 11 – 20 be withdrawn.

§112 Rejection of the Claims

Claims 9 and 19 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has amended claims 9 and 19 to provide antecedent basis for claims 9 and 19. Accordingly, Applicant submits that claims 9 and 19 over the 35 U.S.C. §112, second paragraph rejection and respectfully requests that the rejections be withdrawn.

§103 Rejection of the Claims

Claims 1 – 25 are rejected under 35 U.S.C. §103(a) as being unpatentable over Riley et al. (US PGPub 2002/0123983 A1, hereinafter "Riley").

Discussion of claims 1 – 6, 11 – 16, and 21 – 25

The Examiner asserts that Riley teaches the elements of claim 1. Applicant has amended claim 1. The basis for the amendments to claim 1 is in paragraphs [0015], [0022], and [0031]. The Examiner argues that it would have been obvious to one of ordinary skill in the art that Riley discloses a dynamic social network database which is based on data collected about a service request and the personnel handling the personnel request, and that this information is used in order to determine if the support personnel is able to perform the necessary tasks for their assigned tier. See Office Action at page 11 lines 5 – 10. Applicant respectfully disagrees. Applicant submits that Riley does not teach or suggest a social network database that comprises personal information about each of the support personnel and interpersonal relationships between the support personnel. Moreover, Applicant submits that Riley does not teach the following elements of claim 1, as amended:

> ... determining, using the electronic device, that the first support person of the first
>> customer support level cannot resolve the customer problem;
>
> determining that the first support person should work in conjunction with one of a
>> plurality of personnel of a second customer support level to resolve the
>> problem;
>
> determining, based on accessing a dynamic social network database via the electronic
>> device, information associated with the first support person and the plurality
>> of personnel of the second customer support level;
>
> determining a relationship score that indicates a strength of a relationship between
>> the first support person and each of the plurality of personnel of the second
>> customer support level;
>
> determining that the relationship score between the first support person and a first of
>> the plurality of personnel of the second customer support level is the highest
>> relationship score; and

prompting the first support person to work in conjunction with the first of the

plurality of personnel of the second customer support level to resolve the

customer problem.

Based on the foregoing discussion, Applicant submits that Riley does not teach or suggest each and every element of claim 1. Consequently, Riley also fails to disclose claims 2 – 6 that depend on claim 1. Furthermore, because claims 11 and 21 have been amended to recite similar elements as claim 1, Applicant submits that the Riley fails to teach/suggest each and every element of claims 11 and 21. Consequently, Riley also fails to teach/suggest claims 12 – 16 and 22 - 25 that depend on one of claim 11 and 21. Applicant respectfully requests that the 35 USC §103 rejection of claims 1 – 6, 11 – 16, and 21 – 25 be withdrawn and the claims indicated be made allowable over the art of record.

Discussion of claims 7 – 10 and 17 – 20

In rejecting claim 7, the Examiner asserts that it would have been obvious to one of ordinary skill in the art that Riley discloses a dynamic social network database which is based on data collected about a service request and the personnel handling the personnel request, and that this information is used in order to determine if the support personnel is able to perform the necessary tasks for their assigned tier. See Office Action at page 16 lines 9 – 13. Applicant respectfully disagrees. Although Riley discloses a central service desk repository that comprises solutions to customer problems, Riley does not teach or suggest a social network database that comprises interests of the customers and the support personnel of the first customer support level. Applicant submits that Riley does not teach or suggest claim 7's process of selecting a support person that shares common interests with the customer. In other words, Riley does not teach or suggest claim 7's, "searching, using the electronic device, a dynamic social network database that comprises interests of the plurality of support persons of the first customer support level and the customer based, at least in part on the information about the customer, the problem, and indications of the plurality of support persons of the first customer support level, wherein said searching yields a first of the plurality of support persons that has common interests with the customer." Based on the foregoing discussion, Applicant submits that Riley does not teach or suggest each and every element of claim 7. Consequently, Riley also fails to disclose claims 8 –

10 that depend on claim 7. Furthermore, because claim 17 has been amended to recite similar elements as claim 7, Applicant submits that the Riley fails to teach/suggest each and every element of claim 17. Consequently, Riley also fails to teach/suggest claims 18 – 20 that depend on claim 17. Applicant respectfully requests that the 35 USC §103 rejection of claims 7 – 10 and 17 – 20 be withdrawn and the claims indicated be made allowable over the art of record

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). To do that the Examiner must show that some objective teaching in the prior art or some knowledge generally available to one of ordinary skill in the art would lead an individual to combine the relevant teaching of the references. *Id*. In order for the Examiner to establish a *prima facie* case of obviousness, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *M.P.E.P.* § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir. 1991)).

Reservation of Rights

Applicant does not admit that documents cited under 35 U.S.C. §§ 102(a), 102(e), 103/102(a), or 103/102(e) are prior art, and reserves the right to swear behind them at a later date. Arguments presented to distinguish such documents should not be construed as admissions that the documents are prior art. Applicant also reserves the right to pursue canceled and originally filed claims in a continuation application. Furthermore, Applicant does not acquiesce to any of the Examiner's assertions about the claims or the cited documents and reserves the right to argue these assertions in the future.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney Andrew DeLizio at 281-758-0025 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 09-0447.

Respectfully submitted,

DeLizio Gilliam, PLLC
15201 Mason Road
Suite 1000-312
Cypress, TX 77433
281-758-0025

Date ____10/5/2011_____   By ____/Andrew DeLizio Reg. 52,806/_
                                             Andrew DeLizio
                                             Reg. No. 52,806

This paper or fee is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.