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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):

debbie.henn@philips.com
marianne.fox@philips.com

Office Action Summary	Application No. 10/548,255	Applicant(s) MONTVAY ET AL.	
	Examiner CARRIE STRODER GILKEY	Art Unit 3689	AIA (First Inventor to File) Status No

-- 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 3 MONTHS 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 14 April 2014.
 A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
 4) 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*

5) Claim(s) 1.7-9, 13-20 and 22-24 is/are pending in the application.
 5a) Of the above claim(s) _____ is/are withdrawn from consideration.
 6) Claim(s) _____ is/are allowed.
 7) Claim(s) 1.7-9, 13-20 and 22-24 is/are rejected.
 8) Claim(s) _____ is/are objected to.
 9) Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10) The specification is objected to by the Examiner.
 11) 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).

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).

Certified copies:

a) All b) Some** c) None of the:
 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) Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
 Paper No(s)/Mail Date _____.

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

DETAILED ACTION

In view of the appeal brief filed on 14 April 2014, PROSECUTION IS HEREBY REOPENED. A non-final office action is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/JANICE MOONEYHAM/

Supervisory Patent Examiner, Art Unit 3689

Claim Status

1. This is in response to the applicant's communication filed on 14 April 2014, wherein:
Claims 1, 7-9, 13-20, and 22-24 are currently pending.
2. The present application is being examined under the pre-AIA first to invent provisions.

Claim Rejections - 35 USC § 112

1. The following is a quotation of 35 U.S.C. 112(a):
(a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), first paragraph:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. **Claims 1, 7-9, 13-20, and 22-24 are rejected under 35 U.S.C. 112, first paragraph,** as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1, for example, describes, “determining a relative relevance of each selected message by: with the communication script downloading a default probability for each selected message from a pre-stored look-up table; and during an evolution of the scenario, re-ranking the selected messages according to evolved probabilities calculated by a scenario evolution algorithm.” However, the specification does not explain how the default probabilities are determined for the look up table or how the calculation of the probabilities of the messages is performed. Applicant simply states that the calculation is known to persons in the art (see page 8, line 23). There are multiple ways to calculate probabilities known in the art. Examiner does not know how applicant chose to calculate the probabilities. Applicant has merely claimed the result that is obtained without explaining how he accomplished the result for his invention. While Examiner knows what end result applicant is trying to accomplish, Examiner is unable to determine how applicant envisioned this part of the claimed steps to be completed. Examiner notes that new claim 24 indicates that the probabilities are calculated using a cost function algorithm. However, this algorithm is given in the specification as an example of possible algorithms and is not definitely used in claim 1 - other algorithms could be used. Further, the cost function used is not described, nor is the way in which it would be applied to the current invention. The other independent claims have similar language. Claim 7 states, “with a ranking engine routine, ranking the selected messages, the message with a higher relevance to the current state of the scenario being ranked higher.” Although this does not explicitly state that the relevance is being assigned, it is implied in the step. Claims 9 and 20 refer to assigning a relative rank to the messages.

When examining computer implemented, functional claims, examiners should determine whether the specification discloses the computer and the algorithm (e.g., the necessary steps and/or flowcharts) that perform the claimed function in sufficient detail such that one of ordinary skill in the art can reasonably conclude that the inventor invented the claimed subject matter. Specifically, if one skilled in the art would know how to program the disclosed computer to perform the necessary steps described in the specification to achieve the claimed function and the inventor was in possession of that knowledge, the written description requirement would be satisfied. If the specification does not provide a disclosure of the computer and algorithm in sufficient detail to demonstrate to one of ordinary skill in the art that the inventor possessed the invention including how to program the disclosed computer to perform the claimed function, a rejection under § 112, ¶ 1 for lack of written description must be made. For more information regarding the written description requirement, see MPEP §2161.01–2163.07(b). In this case, applicant's specification does not disclose an algorithm for performing the function in sufficient detail such that one of ordinary skill in the art can reasonably conclude that the inventor invented the claimed subject matter.

Claims 1, 7-9, 13-20, and 22-24 refer to using a computer to accomplish the claimed steps (claims 1, 13-16 and 24) or as part of the system claimed (claims 7, 8, 9, 17-20, 22, and 23). At most, the specification discloses generic computers and processors. However, for a specific function, the specification must disclose the computer and the algorithm (e.g., the necessary steps and/or flowcharts) that perform the claimed function sufficient detail such that one of ordinary skill can reasonably conclude that the inventor invented the claimed subject matter. It is

not sufficient that one of ordinary skill in the art is capable of writing the software/program to achieve the claimed function. There must be an explanation of how the computer or component performs the claimed function. Here, the claimed functions appear to be specific functions that require a special purpose computer to perform, and the specification fails to disclose the corresponding structure and algorithm required to perform the claimed functions. As such, applicant has not met the requirements of 35 USC §112, first paragraph.

Claim Rejections - 35 USC § 101

1. 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.

Claims 1, 13-16, and 24 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, they 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:

There are factors which weigh toward the claim being directed to an abstract idea. Such as the lack of a particular machine conducting a significant step of the method, the lack of transformation of an article, the scope of the invention being drawn to a general business concept, and that the limitations are broad enough to encompass any and all manner of providing a communication script.

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Specifically while the claim recites “*with a computer*” it is not clear as to the level of involvement of the computing device that is required by the claims. When reviewing the specification, it is clear that the operator could do the steps with a computer (see [0033]-[0034] of the printed publication of the specification). Therefore, it is not clear as to what steps are actually being performed by the computer (if any) and what steps are being performed by the operator.

Further the claims fail to recite a transformation, because the claimed steps do not result in an article being transformed from one state to another. There is no transformation occurring in the claims for a physical object or substance or data that represents physical objects or substances and there is no tie to a particular machine for any of the claimed steps. The claims as recited are directed toward the abstract idea of providing a communication script, which is a general business concept. As shown above there is not a significant tie to a particular machine to show that the involvement of the computer constitutes a practical application of this concept. The claims could be performed by any currently known or future manner of providing a communication script.

Based upon consideration of all of the relevant factors with respect to the claims as a whole, the above claims are held to claim an abstract idea, and are therefore rejected as ineligible subject matter under 35 U.S.C. 101.

Claim Rejections - 35 USC § 103

1. 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 negated by the manner in which the invention was made.

2. **Claims 1 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (US 5757904), in view of Pizzorno et al. (US 20030140063), and further in view of Pelikan (US 7047169).**

Referring to claim 1:

Anderson discloses a method of routing a dialog between an operator at a call center and a customer using a telephony unit by means of a communication script, said communication script being arranged to follow a scenario corresponding to a customer's case by presenting a plurality of messages to the operator, said method comprising the steps of:

receiving a customer call with telephonic equipment (col. 2, lines 32-59 and col. 3, lines 40-41 and col. 4, lines 63-67; where the agent 55 is speaking with a customer on the phone 117);

with a computer performing the following steps (col. 4, lines 12-20; *workstations 118 are stored program-controlled computers*):

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determining a type of said scenario (col. 2, lines 32-59 and col. 4, lines 63-67 thru col. 5, lines 3; *the monitoring also includes monitoring with whom the agent at the agent position is presently engaged and When agent Eng answers the call, Mr. Allen gives his name and explains that he is a customer needing to make changes to his reservations* and where the type of scenario is that the customer needs his reservations changed and this information is entered into workstation 118 at step 202);

generating a communication script by loading a plurality of default messages from a predefined default scenario corresponding to the type of scenario (col. 2, line 32 thru col. 3, line 13; *...receiving a request for information (such as directory information or a list of wrapup codes, for example) which is most relevant to the monitored activities and which excludes some of the requested information, and then presenting (e.g. displaying) only the subset of the requested information at the agent position...* where the list of wrapup codes is interpreted as a plurality of default messages which are from a predefined default scenario (the codes themselves are predefined) and correspond to the type of scenario);

determining a current state of said scenario (col. 2, lines 32-59 and col. 5, lines 4-11 and col. 7, lines 10-12; *the monitoring also includes...what the telephone call is about and where workstation 118 evaluating the record to determine whether the agent made the original reservation is determining the current state*);

determining an evolution of the scenario by comparing the current state of said scenario and a default state of said predefined default scenario to determine if the said scenario has evolved differently with respect to said predefined default scenario (col. 5, lines 42-67; *At step 304 workstation 118 examines Mr. Allen's records to determine if other records are impacted, at step 306. This may be done either automatically or in response to a request from agent Doe. Upon finding the indication that a plurality of reservations were made jointly with this reservation, it obtains records of these reservations from host 116, at step 308, and examines them for commonality with Mr. Allen's reservations, at step 310. Upon finding commonality--Messrs. Allen, Brown, and Casey are arriving in New York at substantially the same time, not to mention taking the same flight from New York to Paris--workstation 118 displays an indication thereof--such as a window with excerpts from Mr. Brown's and Mr. Casey's records with the commonalities highlighted--at step 312 where workstation 118 is comparing the default state (Mr. Allen needs a reservation change) with the current state that there are joint reservations to consider, and the "communication script" is updated to display Mr. Brown's and Mr. Casey's records);*

updating the communication script by selecting a plurality of messages from an electronic database of messages in order to yield selected messages, said selection being carried out in compliance with said type, said state, and said evolution of the scenario (col. 2, lines 32-59 and col. 5, lines 4-41; *analyzing the request within the context of the monitored activities to determine a subset of the requested information...which is most relevant to the monitored activities and Workstation 118 then displays a message recommending that the call be*

transferred to agent Doe and Workstation 118 then displays a message recommending that the call be transferred to agent Doe and where the workstation displays messages to the agent which are appropriate given the previously input information); and

determining a relative relevance of each selected message by (col. 2, lines 32-59 and col. 6, lines 11-31; *analyzing the request within the context of the monitored activities to determine a subset of the requested information... which is most relevant to the monitored activities...presenting the requested information in a manner that emphasizes the subset over the rest of the requested information and workstation 118 proceeds to determine what directory entries are most relevant to (a) the customer or customers involved in the call and (b) the transaction being executed*):

ranking the selected messages, a message with a higher probability of relevance being ranked higher (col. 2, lines 32-59 and col. 6, lines 45-51; *analyzing the request within the context of the monitored activities to determine a subset of the requested information...which is most relevant to the monitored activities...presenting the requested information in a manner that emphasizes the subset over the rest of the requested information (e.g., highlighting the subset) and If some relevant telephone numbers are call center agents' extensions, workstation 118 obtains the status of those agents...Workstation 118 then displays the call destinations and their telephone numbers, at step 408, and highlights those agents who are available... and where highlighting the information which is most relevant is interpreted as ranking that information higher*);

generating a text list of the plurality of said selected messages together with their rank (col. 2, lines 32-59 and col. 6, lines 45-51; *presenting (e.g. displaying)...the requested information in a manner that emphasizes the subset over the rest of the requested information (e.g., highlighting the subset)* and *If some relevant telephone numbers are call center agents' extensions, workstation 118 obtains the status of those agents...Workstation 118 then displays the call destinations and their telephone numbers, at step 408, and highlights those agents who are available... and where displaying the other agents and their phone numbers is a text list);*

with a user interface presenting the text list to the operator (col. 2, lines 32-59 and col. 6, lines 45-51; *presenting (e.g. displaying)...the requested information and Workstation 118 then displays the call destinations and their telephone numbers).*

wherein in order to determine the relevance of the selected message, each selected message is assigned a probability within the scenario (col. 2, lines 32-59 and col. 6, lines 45-51; *analyzing the request within the context of the monitored activities to determine a subset of the requested information...which is most relevant to the monitored activities...presenting the requested information in a manner that emphasizes the subset over the rest of the requested information (e.g., highlighting the subset)* and *If some relevant telephone numbers are call center agents' extensions, workstation 118 obtains the status of those agents...Workstation 118 then displays the call destinations and their telephone numbers, at step 408, and highlights those agents who are available... imply that the selected subset is assigned a probability of relevance, since the most relevant information is being emphasized).*

Anderson discloses a system for providing agents of a call center with information relating to their conversation that is most probable to be helpful (see abstract and col. 7, lines 29-53).

Anderson does not disclose during an evolution of the scenario, re-ranking the selected messages according to evolved probabilities calculated by a scenario evolution algorithm.

However, Pizzorno teaches a similar system which provides expert advice using probabilistic analysis (abstract and [0007]). Pizzorno teaches during an evolution of the scenario, re-ranking the selected messages according to evolved probabilities calculated by a scenario evolution algorithm ([0038]-[0041] *The inference engine accesses nodes and links in the knowledge base to interact with the user and determine a "current state." This current state reflects the state of activation of all nodes in the knowledge base. The "current state" might be understood as a current map of the user's unique biochemical and health system functioning...The user is presented with a representation of the current state (a visual representation in a preferred embodiment), usually giving a summary of causes and recommendations inferred from the knowledge base and user input. As the user is prompted for, and supplies, more information, the inference engine updates the current state, revises the summary results and prompts the user for additional input to keep refining the results[0038]* and *In the preferred embodiment, the causes of dysfunctions are determined by a plurality of damaging factor nodes (corresponding to the different dysfunction causes that may exist) of the experi system which analyze the probabilities from the subsystem dysfunction nodes and other user information to determine if the particular*

dysfunction cause is likely to be present and outputs a probability for each dysfunction cause which may exist[0041]).

It would have been obvious for a person of ordinary skill in the art (PHOSITA) at the time of invention to modify the system disclosed in Anderson to incorporate re-ranking the selected messages as taught by Pizzorno because this would provide a manner for updating the current state as more information is supplied (Pizzorno [0039]), thus aiding the client by refining the results as more information is gathered.

Anderson, as modified by Pizzorno, discloses a system for providing agents of a call center with information relating to their conversation that is most probable to be helpful. Anderson, as modified by Pizzorno, does not disclose with the communication script downloading a default probability for each selected message from a prestored look-up table.

However, Pelikan teaches a complementary system for using probabilistic models for optimizing a solution set (abstract). Pelikan teaches with the communication script downloading a default probability for each selected message from a prestored look-up table (col. 10, lines 53-67; *specify local probability tables*).

It would have been obvious for a person of ordinary skill in the art (PHOSITA) at the time of invention to modify the system disclosed in Anderson and Pizzorno to incorporate prestored look-up tables containing default probabilities as taught by Pelikan because this would provide a

manner for generating a set of solutions (col. 3, lines 50-67), thus aiding the client by ranking the messages in order of most probable.

Referring to claim 16:

Anderson discloses wherein the scenario evolution algorithm loads additional messages from the database (col. 2, lines 32-59 and col. 5, lines 42-62; *analyzing the request within the context of the monitored activities to determine a subset of the requested information...which is most relevant to the monitored activities... presenting the requested information in a manner that emphasizes the subset over the rest of the requested information (e.g., highlighting the subset and the analyzing also includes analyzing the monitored activities and workstation 118 examines Mr. Allen's records to determine if other records are impacted, at step 306. This may be done automatically or in response to a request from agent Doe. Upon finding the indication that a plurality of reservations were made jointly with this reservation, it obtains records of these reservations... and where monitoring the activities implies a continuous tracking of the situation which uploads different messages depending on the monitored activities and where "algorithm" is interpreted as a step by step procedure for solving a problem, as defined by www.thefreedictionay.com which software must inherently contain, as software itself is a set of step by step instructions for the computer to follow in performing some task).*

Pizzorno teaches wherein the scenario evolution algorithm updates the relative relevancies of the selected messages to the scenario ([0038]-[0041] *The inference engine accesses nodes and links in the knowledge base to interact with the user and determine a "current state." This current*

state reflects the state of activation of all nodes in the knowledge base. The "current state" might be understood as a current map of the user's unique biochemical and health system functioning...The user is presented with a representation of the current state (a visual representation in a preferred embodiment), usually giving a summary of causes and recommendations inferred from the knowledge base and user input. As the user is prompted for, and supplies, more information, the inference engine updates the current state, revises the summary results and prompts the user for additional input to keep refining the results[0038] and In the preferred embodiment, the causes of dysfunctions are determined by a plurality of damaging factor nodes (corresponding to the different dysfunction causes that may exist) of the expert system which analyze the probabilities from the subsystem dysfunction nodes and other user information to determine if the particular dysfunction cause is likely to be present and outputs a probability for each dysfunction cause which may exist[0041]) .

3. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (US 5757904), in view of Pizzorno et al. (US 20030140063), in view of Pelikan (US 7047169), and further in view of Holzer et al. (WO 02/46872).

Referring to claim 13:

Anderson, as modified by Pizzorno and Pelikan, discloses a system for providing agents of a call center with information relating to their conversation that is most probable to be helpful. Anderson as modified by Pizzorno and Pelikan does not disclose calculating the next most probable step in the scenario based on information inputted by the customer in response to the

current state of the scenario evolving differently with respect to a default state corresponding to a standard evolution of the default scenario.

However, Holzer teaches a similar system for an automated call center. Holzer teaches calculating the next most probable step in the scenario based on information inputted by the customer in response to the current state of the scenario evolving differently with respect to a default state corresponding to a standard evolution of the default scenario (page 13, lines 15-28; *prompts the CSR with the next statement in the script, either based on a predefined sequence or one dynamically generated in response to the customer's responses in the textual stream*).

It would have been obvious for a person of ordinary skill in the art (PHOSITA) at the time of invention to modify the system disclosed in Anderson, Pizzorno, and Pelikan to incorporate calculating the next most probable step in the scenario based on information inputted by the customer as taught by Holzer because this would provide a manner for prompting the CSR with the next statement in the script (page 13, lines 15-28), thus aiding the client by providing the most pertinent information.

4. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holzer et al. (WO 02/46872), in view of Anderson (US 5757904), in view of Pizzorno et al. (US 20030140063), and further in view of Pelikan (US 7047169).

Referring to claim 20:

Holzer teaches a system arranged to route a dialog between an operator of a call center and a customer, said system comprising:

a telephone device which receives incoming calls (page 7, lines 23-29; *inbound call centers*);

a scenario monitor programmed to determine a type of a scenario (page 12, lines 7-12; *For example, in a customer-service scenario, the keywords "plan", "my bill" or "billing" in the customer's textual stream could prompt the system to instantly call up relevant information about the company's new billing plan*);

a recognition engine programmed to determine and update a current state of the scenario and (page 12, lines 13-29; *...causing the system to go into a special numeric-aware state, wherein it explicitly waits and listens for textual representations of digits*) compare the current state of the scenario with a default state of the predefined default scenario corresponding to an evolution of a default scenario with respect to the predefined default scenario to determine an evolution of the scenario (page 13, lines 15-18; *the CSR's statements can be compared against a predefined or dynamically generated script in order to determine whether or not the CSR has followed the conversation guidelines*); and

a generator of a communication script programmed to select from a plurality of messages from a database of messages in compliance with said type, said current state, and said evolution of the

scenario, in order to obtain a plurality of selected messages (page 3, lines 14-31; *using an established database of anticipated customer responses to specific customer service representatives questions whereby the database can then provide on screen information specific to that customer*).

Holzer discloses a system for an automated call center which analyzes the conversation and provides relevant information. Holzer does not disclose where the generator is further programmed to generate a communication script by loading a plurality of default messages from a predefined default scenario corresponding to the type of scenario; a ranking engine programmed to rank the selected messages, a message with a higher probability of relevance to the current state and evolution of the scenario being ranked higher; and a user interface which displays the selected messages together with their rank to the operator in a list.

However, Anderson teaches a similar system for providing agents of a call center with information relating to their conversation that is most probable to be helpful with the customer's issue. Anderson teaches

where the generator is further programmed to generate a communication script programmed to generate a communication script by loading a plurality of default messages from a predefined default scenario corresponding to the type of scenario (col. 2, line 32 thru col. 3, line 13; *...receiving a request for information (such as directory information or a list of wrapup codes, for example) which is most relevant to the monitored activities and which excludes some of the*

requested information, and then presenting (e.g. displaying) only the subset of the requested information at the agent position... where the list of wrapup codes is interpreted as a plurality of default messages which are from a predefined default scenario (the codes themselves are predefined) and correspond to the type of scenario);

a ranking engine programmed to rank the selected messages, a message with a higher probability of relevance to the current state and evolution of the scenario being ranked higher (col. 2, lines 32-59 and col. 6, lines 45-51; *analyzing the request within the context of the monitored activities to determine a subset of the requested information...which is most relevant to the monitored activities...presenting the requested information in a manner that emphasizes the subset over the rest of the requested information (e.g., highlighting the subset) and If some relevant telephone numbers are call center agents' extensions, workstation 118 obtains the status of those agents...Workstation 118 then displays the call destinations and their telephone numbers, at step 408, and highlights those agents who are available... and where highlighting the information which is most relevant is interpreted as ranking that information higher);*

a user interface which displays the selected messages together with their rank to the operator in a list (col. 2, lines 32-59 and col. 6, lines 45-51; *presenting (e.g. displaying)...the requested information in a manner that emphasizes the subset over the rest of the requested information (e.g., highlighting the subset) and If some relevant telephone numbers are call center agents' extensions, workstation 118 obtains the status of those agents...Workstation 118 then displays*

the call destinations and their telephone numbers, at step 408, and highlights those agents who are available... and where displaying the other agents and their phone numbers is a text list).

It would have been obvious for a person of ordinary skill in the art (PHOSITA) at the time of invention to modify the system disclosed in Holzer to incorporate a script generator, providing a relative relevance to the current state of the scenario, ranking the selected messages, and presenting the plurality of said selected messages together with their rank to the operator in a list by means of a user interface as taught by Anderson because this would provide a manner for providing the agent with the most relevant information (col. 1, lines 24-35), thus aiding the agents and customers by easing the agents' job and speeding up agents' servicing of the calls (col. 1, lines 24-35).

Holzer, as modified by Anderson, discloses a system for an automated call center which analyzes the conversation and provides relevant information. Holzer, as modified by Anderson, does not disclose updating the default probability with the evolution of the scenario such that each message is re-ranked as the scenario evolves.

However, Pizzorno teaches a similar system which provides expert advice using probabilistic analysis (abstract and [0007]). Pizzorno teaches updating the default probability with the evolution of the scenario such that each message is re-ranked as the scenario evolves ([0038]-[0041]) *The inference engine accesses nodes and links in the knowledge base to interact with the user and determine a "current state." This current state reflects the state of activation of all*

nodes in the knowledge base. The "current state" might be understood as a current map of the user's unique biochemical and health system functioning...The user is presented with a representation of the current state (a visual representation in a preferred embodiment), usually giving a summary of causes and recommendations inferred from the knowledge base and user input. As the user is prompted for, and supplies, more information, the inference engine updates the current state, revises the summary results and prompts the user for additional input to keep refining the results[0038] and In the preferred embodiment, the causes of dysfunctions are determined by a plurality of damaging factor nodes (corresponding to the different dysfunction causes that may exist) of the expert system which analyze the probabilities from the subsystem dysfunction nodes and other user information to determine if the particular dysfunction cause is likely to be present and outputs a probability for each dysfunction cause which may exist[0041]).

It would have been obvious for a person of ordinary skill in the art (PHOSITA) at the time of invention to modify the system disclosed in Anderson to incorporate re-ranking the messages as taught by Pizzorno because this would provide a manner for updating the current state as more information is supplied (Pizzorno [0039]), thus aiding the client by refining the results as more information is gathered.

Holzer, as modified by Anderson and Pizzorno, discloses a system for an automated call center which analyzes the conversation and provides relevant information. Holzer, as modified by Anderson and Pizzorno, does not disclose downloading a default probability of relevance from a look-up table.

However, Pelikan teaches a similar system for using probabilistic models. Pelikan teaches downloading a default probability of relevance from a look-up table (col. 10, lines 53-67; *specify local probability tables*).

It would have been obvious for a person of ordinary skill in the art (PHOSITA) at the time of invention to modify the system disclosed in Holzer, Pizzorno, and Anderson to incorporate downloading a default probability of relevance from a look-up table as taught by Pelikan because this would provide a manner for generating a set of solutions (col. 3, lines 50-67), thus aiding the client by ranking the messages in order of most probable.

Further, claim 20 is a system claim and as such, is defined by structure. The only structure included in the claim is “a telephone device”; all other elements of the claim receive little patentable weight as they are not structural.

5. Claims 7 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Menard (US 20030001743), in view of Anderson (US 5757904).

Referring to claim 7:

Menard teaches a system arranged to route a dialog between an operator of a call center and a customer, said system comprising:

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a customer's medical monitor with a communication script arranged to follow a scenario corresponding to the medical monitor by presenting a plurality of messages to the operator ([0102]; *Either the dispatcher D or the processor P may then send an inquiry through the personal wireless device 600 to the personal device 100, instructing the personal device 100 to send various data...;*)

at least one computer programmed to perform the steps of ([0102] *processor* and where a processor implies the use of a computer):

with a scenario routine, determining a type of the scenario from the dialog initiated by the customer's medical monitor, the type of scenario including at least one of a request for medical assistance and support during a medical emergency ([0099]-[0102]; *...the victim V undergoes some sort of cardiac problem, such as tachycardia, that causes the personal device to attempt to establish communication with a caregiver and Using this transmitted data [from the medical monitor], the dispatcher or processor may then make a diagnosis and identify a treatment strategy*); and

with a first recognition routine, determining and updating a current state of the scenario based on the dialog with the customer's medical monitor ([0092] and [0105]; *In one embodiment, the cellular telephone, the base station, emergency monitoring center, or other device displays real time information from the personal device 100 and When the responding personnel R reach the victim, they may establish communications through local area wireless 330 from their medical*

device interface 500 to the victim's personal device 100, request data from the personal device 100, and request the personal device 100 to take some action, such as dispensing medication to the victim V. Their medical device interface 500 may also establish communication with the dispatcher D or medical caregiver using network based communications 360).

Menard discloses a personal medical device communication system. Menard does not disclose with a first script generator routine, loading a plurality of default messages from a predefined default scenario corresponding to the type of scenario; with a second script generator routine, selecting a plurality of messages from an electronic database of messages in compliance with type, said current state, and said evolution in order to obtain a plurality of selected messages; with a second recognition routine, determining an evolution of the scenario by comparing the current state of said scenario and a default state of the predefined default scenario to determine if the said scenario has evolved differently with respect to the predefined default scenario; with a ranking engine routing, ranking the selected messages, the message with a higher relevance to the current state of the scenario being ranked higher; a user interface configured to display the selected messages together with their rank to the operator in a list; wherein the system further includes a probabilistic model configured to assign a probability to each selected message in order to determine the relevance of the message within the scenario; and wherein the probabilistic model is configured to assign the probability is further configured to communicate with a scenario evolution algorithm arranged to calculate respective probabilities of the selected messages.

However, Anderson teaches a similar system for providing agents of a call center with information relating to their conversation that is most probable to be helpful with the customer's issue. Anderson teaches

with a first script generator routine, loading a plurality of default messages from a predefined default scenario corresponding to the type of scenario (col. 2, line 32 thru col. 3, line 13; *...receiving a request for information (such as directory information or a list of wrapup codes, for example) which is most relevant to the monitored activities and which excludes some of the requested information, and then presenting (e.g. displaying) only the subset of the requested information at the agent position...* where the list of wrapup codes is interpreted as a plurality of default messages which are from a predefined default scenario (the codes themselves are predefined) and correspond to the type of scenario);

with a second recognition routine, determining an evolution of the scenario by comparing the current state of said scenario and a default state of the predefined default scenario to determine if the said scenario has evolved differently with respect to the predefined default scenario (col. 5, lines 42-67; *At step 304 workstation 118 examines Mr. Allen's records to determine if other records are impacted, at step 306. This may be done either automatically or in response to a request from agent Doe. Upon finding the indication that a plurality of reservations were made jointly with this reservation, it obtains records of these reservations from host 116, at step 308, and examines them for commonality with Mr. Allen's reservations, at step 310. Upon finding commonality--Messrs. Allen, Brown, and Casey are arriving in New York at substantially the*

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same time, not to mention taking the same flight from New York to Paris--workstation 118 displays an indication thereof--such as a window with excerpts from Mr. Brown's and Mr. Casey's records with the commonalities highlighted--at step 312 where workstation 118 is comparing the default state (Mr. Allen needs a reservation change) with the current state that there are joint reservations to consider, and the "communication script" is updated to display Mr. Brown's and Mr. Casey's records);

with a second script generator routine, selecting a plurality of messages from the electronic database of messages in compliance with said type, said current state, and said evolution in order to obtain a plurality of selected messages (col. 2, lines 32-59 and col. 5, lines 4-41; *analyzing the request within the context of the monitored activities to determine a subset of the requested information...which is most relevant to the monitored activities and Workstation 118 then displays a message recommending that the call be transferred to agent Doe and Workstation 118 then displays a message recommending that the call be transferred to agent Doe and where the workstation displays messages to the agent which are appropriate given the previously input information);*

with a ranking engine routine, ranking the selected messages, the message with a higher relevance to the current state of the scenario being ranked higher (col. 2, lines 32-59 and col. 6, lines 45-51; *analyzing the request within the context of the monitored activities to determine a subset of the requested information...which is most relevant to the monitored activities...presenting the requested information in a manner that emphasizes the subset over the*

rest of the requested information (e.g., highlighting the subset) and If some relevant telephone numbers are call center agents' extensions, workstation 118 obtains the status of those agents...Workstation 118 then displays the call destinations and their telephone numbers, at step 408, and highlights those agents who are available... and where highlighting the information which is most relevant is interpreted as ranking that information higher);

a user interface configured to display the selected messages together with their rank to the operator in a list (col. 2, lines 32-59 and col. 6, lines 45-51; *presenting (e.g. displaying)...the requested information in a manner that emphasizes the subset over the rest of the requested information (e.g., highlighting the subset) and If some relevant telephone numbers are call center agents' extensions, workstation 118 obtains the status of those agents...Workstation 118 then displays the call destinations and their telephone numbers, at step 408, and highlights those agents who are available... and where displaying the other agents and their phone numbers is a text list);*

wherein the system further includes a probabilistic model configured to assign a probability to each selected message in order to determine the relevance of the message within the scenario (col. 2, lines 32-59 and col. 6, lines 45-51; *analyzing the request within the context of the monitored activities to determine a subset of the requested information...which is most relevant to the monitored activities...presenting the requested information in a manner that emphasizes the subset over the rest of the requested information (e.g., highlighting the subset) and If some relevant telephone numbers are call center agents' extensions, workstation 118 obtains the*

status of those agents... Workstation 118 then displays the call destinations and their telephone numbers, at step 408, and highlights those agents who are available... imply that the selected subset is assigned a probability of relevance, since the most relevant information is being emphasized); and

wherein the probabilistic model is configured to assign the probability is further configured to communicate with a scenario evolution algorithm arranged to calculate respective probabilities of the selected messages (col. 3, line 35 thru col. 4, line 42; where Anderson describes that his invention is performed by software running on a database, a server, and various workstation computers, which must communicate various items of information to each other in order to function properly).

It would have been obvious for a person of ordinary skill in the art (PHOSITA) at the time of invention to modify the system disclosed in Menard to incorporate the improved operator message center, which shows various messages which are relevant to the scenario as taught by Anderson because this would provide a manner with information relating to their conversation that is most probable to be helpful (see abstract and col. 7, lines 29-53), thereby easing the agents' job and speeding up agents' serving of the calls.

Referring to claim 22:

Anderson teaches a text generator which generates text which is displayed to the operator on the user interface (col. 2, lines 32-59; *presenting (e.g. displaying)...the requested information*).

Referring to claim 23:

Anderson teaches wherein the generator includes a text generator which generates the selected messages as text which is displayed on the user interface ((col. 2, lines 32-59; *presenting (e.g. displaying) ...the requested information*).

6. **Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Menard (US 20030001743), in view of Anderson (US 5757904), and further in view of Holzer et al. (WO 02/46872).**

Referring to claim 17:

Menard discloses a personal medical device communication system. Anderson teaches a similar system for providing agents of a call center with information relating to their conversation that is most probable to be helpful with the customer's issue. Menard and Anderson do not disclose wherein the recognition engine is a voice recognition engine is configured to detect a key word in a communication between the operator and the customer to determine the current state of the scenario.

However, Holzer teaches a similar system for an automated call center. Holzer teaches wherein the recognition engine is a voice recognition engine is configured to detect a key word in a communication between the operator and the customer to determine the current state of the

scenario (page 11, line 21 thru page 12, line 6; *voice-monitoring device and analyzed for keywords or patterns*).

It would have been obvious for a person of ordinary skill in the art (PHOSITA) at the time of invention to modify the system disclosed in Menard and Anderson to incorporate wherein the recognition engine is a voice recognition engine is configured to detect a key word in a communication between the operator and the customer to determine the current state of the scenario as taught by Holzer because this would provide a manner for automatically providing key words which are used for functions performed based on the results (page 12, lines 1-5), thus aiding the operator by making it easier for them to concentrate on the customer, as they do not have to type in any information.

Referring to claim 18:

Menard discloses a personal medical device communication system. Anderson teaches a similar system for providing agents of a call center with information relating to their conversation that is most probable to be helpful with the customer's issue. Menard and Anderson do not disclose wherein the probabilistic model communicates with the scenario evolution algorithm to calculate respective probabilities of the selected messages when an unpredictable change occurs during a evolution of a default scenario of questions and instructions between the operator and the customer.

However, Holzer teaches a similar system for an automated call center. Holzer teaches wherein the probabilistic model communicates with the scenario evolution algorithm to calculate respective probabilities of the selected messages when an unpredictable change occurs during a evolution of a default scenario of questions and instructions between the operator and the customer (page 13, lines 15-28; *...prompts the CSR with the next statement in the script, either based on a predefined sequence or one dynamically generated in response to the customer's responses in the textual stream...* indicates use of an algorithm).

It would have been obvious for a person of ordinary skill in the art (PHOSITA) at the time of invention to modify the system disclosed in Menard and Anderson to incorporate wherein the probabilistic model communicates with the scenario evolution algorithm to calculate respective probabilities of the selected messages when an unpredictable change occurs during a evolution of a default scenario of questions and instructions between the operator and the customer as taught by Holzer because this would provide a manner for prompting the CSR with the next statement in the script (page 13, lines 15-28), thus aiding the client by providing the most pertinent information.

7. **Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Menard (US 20030001743), in view of Anderson (US 5757904), and further in view of Horowitz et al. (US 6349290).**

Referring to claim 8:

Menard discloses a personal medical device communication system. Anderson teaches a similar system for providing agents of a call center with information relating to their conversation that is most probable to be helpful with the customer's issue. Menard and Anderson do not disclose wherein the selected messages includes a configurable textual string, said system further including a text generator configured to generate text, to configure said textual string and control the user interface to present the configured textual string.

However, Horowitz teaches a similar system for generating interactive advice. Horowitz teaches wherein the selected messages includes a configurable textual string, said system further including a text generator configured to generate text, to configure said textual string and control the user interface to present the configured textual string (col. 25, lines 9-53; *The presentation engine 106 for an embodiment of the present invention has at its disposal a text parser, which parses text input provided by the customer 2 into a numerically structured format that can be used by the system in generating responses. The input parser can also reverse the parse, so that it presents numerically structured advice sequence in English prose*).

It would have been obvious for a person of ordinary skill in the art (PHOSITA) at the time of invention to modify the system disclosed in Menard and Anderson to incorporate wherein the selected messages includes a configurable textual string, said system further including a text generator configured to generate text, to configure said textual string and control the user interface to present the configured textual string as taught by Horowitz because this would

provide a manner for providing the responses received from the advice engine (col. 25, lines 5-8), thus aiding the client by providing the best information for the situation.

Referring to claim 19:

Menard discloses communicating the location of the customer (paragraph 109).

Horowitz teaches wherein the text generator updates the configurable text string with information based at least in part on data input (col. 25, lines 9-53; *The presentation engine 106 for an embodiment of the present invention has at its disposal a text parser, which parses text input provided by the customer 2 into a numerically structured format that can be used by the system in generating responses. The input parser can also reverse the parse, so that it presents numerically structured advice sequence in English prose*).

8. **Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (US 5757904), in view of Pizzorno et al. (US 20030140063), and further in view of Horowitz et al. (US 6349290).**

Referring to claim 9:

Anderson discloses a script generating apparatus which routes a dialog between an operator's user interface at a call center and a customer's telephony unit and following a scenario corresponding to a case of the customer, said script generator including:

a computer programmed to (col. 4, lines 12-20; *workstations 118 are stored program-controlled computers*):

determine a type of the scenario (col. 2, lines 32-59 and col. 4, lines 63-67 thru col. 5, lines 3; *the monitoring also includes monitoring with whom the agent at the agent position is presently engaged and When agent Eng answers the call, Mr. Allen gives his name and explains that he is a customer needing to make changes to his reservations* and where the type of scenario is that the customer needs his reservations changed and this information is entered into workstation 118 at step 202);

load a plurality of default messages from a predefined default scenario corresponding to the type of scenario (col. 2, line 32 thru col. 3, line 13; *...receiving a request for information (such as directory information or a list of wrapup codes, for example) which is most relevant to the monitored activities and which excludes some of the requested information, and then presenting (e.g. displaying) only the subset of the requested information at the agent position...* where the list of wrapup codes is interpreted as a plurality of default messages which are from a predefined default scenario (the codes themselves are predefined) and correspond to the type of scenario);

detect a current state of said scenario (col. 2, lines 32-59 and col. 5, lines 4-11 and col. 7, lines 10-12; *the monitoring also includes...what the telephone call is about* and where workstation 118 evaluating the record to determine whether the agent made the original reservation is detecting the current state);

determining an evolution of the scenario by comparing the current state of the scenario with a default state of the predefined default scenario (col. 5, lines 42-67; *At step 304 workstation 118 examines Mr. Allen's records to determine if other records are impacted, at step 306. This may be done either automatically or in response to a request from agent Doe. Upon finding the indication that a plurality of reservations were made jointly with this reservation, it obtains records of these reservations from host 116, at step 308, and examines them for commonality with Mr. Allen's reservations, at step 310. Upon finding commonality--Messrs. Allen, Brown, and Casey are arriving in New York at substantially the same time, not to mention taking the same flight from New York to Paris--workstation 118 displays an indication thereof--such as a window with excerpts from Mr. Brown's and Mr. Casey's records with the commonalities highlighted--at step 312 where workstation 118 is comparing the default state (Mr. Allen needs a reservation change) with the current state that there are joint reservations to consider, and the "communication script" is updated to display Mr. Brown's and Mr. Casey's records);*

select a plurality of messages from an electronic database of messages in compliance with said type, said state, and said evolution of the scenario in order to yield selected messages (col. 2, lines 32-59 and col. 5, lines 4-41; *analyzing the request within the context of the monitored activities to determine a subset of the requested information...which is most relevant to the monitored activities and Workstation 118 then displays a message recommending that the call be transferred to agent Doe and Workstation 118 then displays a message recommending that the*

call be transferred to agent Doe and where the workstation displays messages to the agent which are appropriate given the previously input information);

calculating current ranks of the selected messages in accordance with a probability that each selected message is relevant to a detected current state of said scenario as the scenario evolves (col. 2, lines 32-59 and col. 3, line 35 thru col. 4, line 42; *analyzing the request within the context of the monitored activities to determine a subset of the requested information...which is most relevant to the monitored activities...presenting the requested information in a manner that emphasizes the subset over the rest of the requested information (e.g., highlighting the subset)* and where highlighting the information which is most relevant is interpreted as ranking that information higher), and

a user interface controlled by the computer to present the selected messages together with their current ranks to the operator in a list (col. 2, lines 32-59 and col. 6, lines 45-51; *presenting (e.g. displaying)...the requested information in a manner that emphasizes the subset over the rest of the requested information (e.g., highlighting the subset) and If some relevant telephone numbers are call center agents' extensions, workstation 118 obtains the status of those agents...Workstation 118 then displays the call destinations and their telephone numbers, at step 408, and highlights those agents who are available... and where displaying the other agents and their phone numbers is a text list).*

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Anderson discloses a system for providing agents of a call center with information relating to their conversation that is most probable to be helpful (see abstract and col. 7, lines 29-53).

Anderson does not disclose re-calculating current ranks of the selected messages in accordance with a probability that each selected message is relevant to a detected current state of said scenario as the scenario evolves.

However, Pizzorno teaches a similar system which provides expert advice using probabilistic analysis (abstract and [0007]). Pizzorno teaches re-calculating current ranks of the selected messages in accordance with a probability that each selected message is relevant to a detected current state of said scenario as the scenario evolves ([0038]-[0041]) *The inference engine accesses nodes and links in the knowledge base to interact with the user and determine a "current state." This current state reflects the state of activation of all nodes in the knowledge base. The "current state" might be understood as a current map of the user's unique biochemical and health system functioning...The user is presented with a representation of the current state (a visual representation in a preferred embodiment), usually giving a summary of causes and recommendations inferred from the knowledge base and user input. As the user is prompted for, and supplies, more information, the inference engine updates the current state, revises the summary results and prompts the user for additional input to keep refining the results/[0038] and In the preferred embodiment, the causes of dysfunctions are determined by a plurality of damaging factor nodes (corresponding to the different dysfunction causes that may exist) of the expert system which analyze the probabilities from the subsystem dysfunction nodes and other*

user information to determine if the particular dysfunction cause is likely to be present and outputs a probability for each dysfunction cause which may exist[0041]).

It would have been obvious for a person of ordinary skill in the art (PHOSITA) at the time of invention to modify the system disclosed in Anderson to incorporate re-ranking the selected messages as taught by Pizzorno because this would provide a manner for updating the current state as more information is supplied (Pizzorno [0039]), thus aiding the client by refining the results as more information is gathered.

Anderson, as modified by Pizzorno, discloses a system for providing agents of a call center with information relating to their conversation that is most probable to be helpful with the customer's issue. Anderson, as modified by Pizzorno, does not disclose wherein the selected messages include a configurable textual string, and generate text to configure the textual string.

However, Horowitz teaches a similar system for generating interactive advice. Horowitz teaches

wherein the selected messages include a configurable textual string (col. 25, lines 9-53; The presentation engine 106 for an embodiment of the present invention has at its disposal a text parser, which parses text input provided by the customer 2 into a numerically structured format that can be used by the system in generating responses. The input parser can also reverse the parse, so that it presents numerically structured advice sequence in English prose), and

generate text to configure the textual string (col. 25, lines 9-53; *The presentation engine 106 for an embodiment of the present invention has at its disposal a text parser, which parses text input provided by the customer 2 into a numerically structured format that can be used by the system in generating responses. The input parser can also reverse the parse, so that it presents numerically structured advice sequence in English prose*).

It would have been obvious for a person of ordinary skill in the art (PHOSITA) at the time of invention to modify the system disclosed in Anderson and Pizzorno to incorporate wherein the selected messages include a configurable textual string, and generate text to configure the textual string as taught by Horowitz because this would provide a manner for providing the responses received from the advice engine (col. 25, lines 5-8), thus aiding the client by providing the best information for the situation.

9. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (US 5757904), in view of Pizzorno et al. (US 20030140063), and further in view of Pelikan (US 7047169), as applied to claim 1, and further in view of Menard (US 20030001743).

Referring to claim 14:

Anderson, as modified by Pizzorno and Pelikan, discloses a system for providing agents of a call center with information relating to their conversation that is most probable to be helpful. However, Anderson, as modified by Pizzorno and Pelikan, does not disclose a customer's

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medical monitor initiates the dialog; the type of said scenario is determined from the dialog with the customer's medical monitor; and the messages are selected based on the dialog with the customer's medical monitor.

However, Menard teaches a similar system for a call center which interacts with a personal medical device communication system. Menard teaches

a customer's medical monitor initiates the dialog (paragraphs 99-102; *the victim V undergoes some sort of cardiac problem, such as tachycardia, that causes the personal device to attempt to establish communication with a caregiver*);

the type of said scenario is determined from the dialog with the customer's medical monitor (paragraphs 99-102; *Using this transmitted data [from the medical monitor], the dispatcher or processor may then make a diagnosis and identify a treatment strategy*); and

the messages are selected based on the dialog with the customer's medical monitor (paragraphs 99-102; *processor...may then make a diagnosis and identify a treatment strategy indicates selecting a message*).

It would have been obvious for a person of ordinary skill in the art (PHOSITA) at the time of invention to modify the system disclosed in Anderson and Pelikan to incorporate a customer's medical monitor as taught by Menard because this would provide a manner for providing using a

medical device to improve the survivability during an acute medical event (Menard [0009]), thus aiding the client by helping to save a person's life.

Referring to claim 15:

Anderson, as modified by Pizzorno and Pelikan, discloses a similar system for providing agents of a call center with information relating to their conversation that is most probable to be helpful with the customer's issue. Pelikan teaches a system for using probabilistic models. However, Anderson, as modified by Pizzorno and Pelikan, does not disclose wherein the type of scenario includes at least one of a request for medical assistance and support during a medical emergency.

However, Menard teaches a similar system for a call center which interacts with a personal medical device communication system. Menard teaches wherein the type of scenario includes at least one of a request for medical assistance and support during a medical emergency (paragraphs 99-102; *the victim V undergoes some sort of cardiac problem, such as tachycardia, that causes the personal device to attempt to establish communication with a caregiver*).

It would have been obvious for a person of ordinary skill in the art (PHOSITA) at the time of invention to modify the system disclosed in Anderson, Pizzorno, and Pelikan to incorporate wherein the type of scenario includes at least one of a request for medical assistance and support during a medical emergency as taught by Menard because this would provide a manner for using a medical device to improve the survivability during an acute medical event (Menard [0009]), thus aiding the client by helping to save a person's life.

10. **Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (US 5757904), in view of Pizzorno et al. (US 20030140063), in view of Pelikan (US 7047169), and further in view of Horvitz et al. (US 7120865).**

Referring to claim 24:

Anderson, as modified by Pizzorno and Pelikan, discloses a similar system for providing agents of a call center with information relating to their conversation that is most probable to be helpful with the customer's issue. However, Anderson, as modified by Pizzorno and Pelikan, does not disclose the default probability and evolved probabilities are calculated utilizing a cost function algorithm.

However, Horvitz teaches a similar system for prioritizing messages (abstract). Horvitz teaches the default probability and evolved probabilities are calculated utilizing a cost function algorithm (col. 10, lines 31-55 where a cost function is described as being used to calculate the likelihood that a document is of high priority).

It would have been obvious for a person of ordinary skill in the art (PHOSITA) at the time of invention to modify the system disclosed in Anderson, Pizzorno, and Pelikan to incorporate using cost functions as taught by Horvitz because this would provide a manner for determining the priority of a message (Horvitz col. 10, lines 31-55), thus aiding the client by directing the client's attention to the most important message.

Response to Arguments

Applicant's arguments filed 14 April 2014 have been fully considered but they are not persuasive.

A. Claims 1 and Claims 13-16 do not patentably distinguish over the prior art

In response to applicant's argument that Anderson and Pelikan are nonanalogous art, The Federal Circuit has traditionally followed a two step analysis to determine whether a reference is analogous: "(1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem." *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004). In this case, Anderson discloses a system for providing agents of a call center with information relating to their conversation that is most probable to be helpful, thereby providing agents with a set of solutions. Pelikan teaches a complementary system for using probabilistic models for optimizing a solution set (abstract). Therefore, the prior art are all, at the least, reasonably pertinent to the particular problem, which involves providing solutions to a problem.

Further, in *KSR v. Teleflex*, the Supreme Court ruled that "any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining [prior art] elements in the manner claimed." While that holding addressed a slightly different doctrinal aspect of the nonobviousness analysis, the bases for the Supreme Court's

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ruling in *KSR* would apply for the analogous arts test. This appellate decision does not discuss *KSR*. However, in *Wyers v. Master Lock*, 616 F.3d 1231 (Fed. Cir. 2010) (Dyk, J.), the Federal Circuit opined that *KSR* "directs [the court] to construe the scope of analogous art broadly." In *Wyers*, Judge Dyk points to the *KSR* statement that "familiar items may have obvious uses beyond their primary purposes, and a person of ordinary skill often will be able to fit the teachings of multiple patents together like pieces of a puzzle." Examiner emphasizes that *KSR* indicates that the scope of analogous art should be construed broadly, not narrowly, as is advanced by applicant.

Applicant further argues that Anderson does not teach determining an evolution of a scenario and during the evolution of the scenario, re-ranking the selected messages. However, Examiner has provided new art for this limitation of the claims. Pizzorno teaches the re-ranking of the selected messages in [0038]-[0041] (see above for full details).

B. Claim 13 does not patentably distinguish over the prior art

Applicant argues that the prior art does not disclose "determining evolution, much less determining probability based on a current state of a scenario..." However, this is not what is claimed in claim 13. Claim 13 is directed to "calculating the next most probable step in the scenario..." based on the input information. Examiner cannot read the specification into the claims.

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C. Claim 14 does not patentably distinguish over the prior art

Applicant argues that the prior art does not teach the claimed limitations, stating that “the care giver could use the bystander’s cell phone...” Examiner respectfully disagrees. Menard, in [0099]-[0102] describes a scenario in which the medical monitor (Menard’s “personal device 100”) initiates a dialog, and provides information which is used to identify a treatment strategy.

D. Claim 15 does not patentably distinguish over the prior art

Applicant reiterates the previous arguments regarding the prior art. Examiner responds as above.

E. Claim 16 does not patentably distinguish over the prior art

Applicant argues that the prior art does not disclose the claimed limitation. However, Examiner has updated the rejection to include Pizzorno, which teaches wherein the scenario evolution algorithm updates the relative relevancies of the selected messages to the scenario (see Pizzorno [0038]-[0041]).

F. Claim 7 does not patentably distinguish over the prior art

Applicant argues that Menard does not disclose determining a type, a current state, or an evolution of scenario from a dialog initiated with a medical monitor and selecting a plurality of messages... Examiner respectfully disagrees and first notes that Menard is not used to teach the limitation regarding the selecting of the messages or the evolution of the scenario. Further, Menard states in [0102] that, using the data from the medical monitor (Menard’s “personal

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device 100’), the processor may then make a diagnosis and identify a treatment strategy. This is interpreted as determining the type and current state of the scenario.

G. Claim 18 does not patentably distinguish over the prior art

Applicant argues that Menard and Anderson do not disclose the claimed limitation. However, Holzer is used to teach this limitation; not Menard or Anderson.

H. Claim 9 does not patentably distinguish over the prior art

Applicant argues that Anderson does not disclose providing a communication script, determining an evolution of a scenario, and providing messages for a communication script based on the evolution. Examiner respectfully disagrees. Anderson provides a communication script when workstation 118 displays a message recommending that the call be transferred to agent Doe in col. 5, lines 4-41. Anderson further provides determining an evolution of a scenario and providing messages for the script based on the scenario in col. 2, lines 32-59 by “...analyzing the request within the context of the monitored activities to determine a subset of the requested information...which is most relevant to the monitored activities...” Examiner believes that applicant is interpreting the term “communication script” in an overly narrow manner, to indicate a script read by an operator to a customer. However, Examiner must interpret all claim limitations in the broadest reasonable manner. A communication script can simply indicate a communication to the operator.

I. Claim 20 does not patentably distinguish over the prior art

Applicant argues that Holzer does not disclose generating a communication script including a plurality of messages based on an evolution of the scenario. Examiner respectfully disagrees.

Holzer provides for this limitation in page 3, lines 14-31 (see above for a full explanation).

Again, Examiner believes applicant is interpreting the claim language referring to a “communication script” in an overly narrow fashion. Examiner reminds applicant that the Examiner must interpret all claim limitations in the broadest reasonable manner and cannot import limitations from the specification into the claims.

J. 35 USC §112, first paragraph

The claims were rejected under 35 USC 112, first paragraph as they contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had **possession** of the claimed invention. Applicant provides prior art as a basis for enablement of the invention. The basis for the rejection is not whether a person of ordinary skill in the art would be able to practice the invention without undue experimentation. The rejection is based on Examiner’s concern is that that there are multiple ways to calculate probabilities known in the art. Examiner does not know how **applicant** chose to calculate the probabilities. The prior art provided, while showing a way to calculate probabilities known in the art, does not necessarily provide this information.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CARRIE STRODER GILKEY whose telephone number is (571)270-7119. The examiner can normally be reached on Monday - Thursday 9:00 a.m. - 6:00 p.m. ET.

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

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/CARRIE STRODER GILKEY/
Primary Examiner, Art Unit 3689