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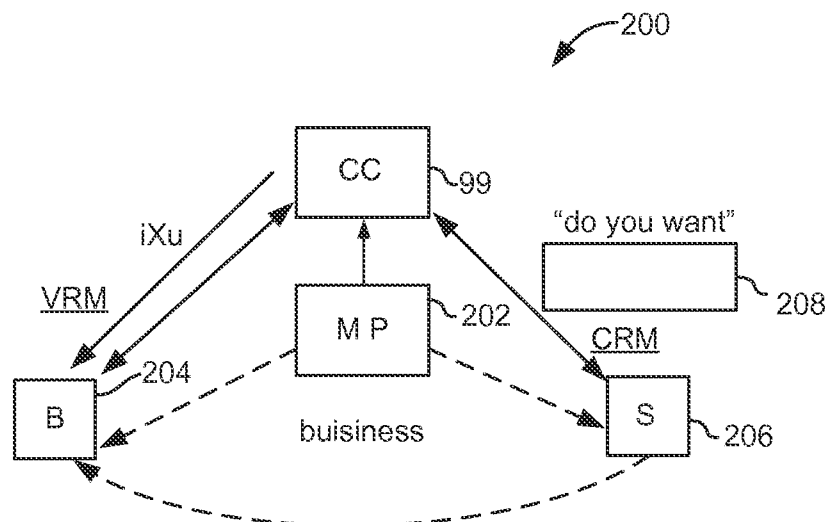


Figure 2

- (57) Abstract: A system includes a contact center to provide an interaction between a consumer and an agent workstation of the contact center, where the consumer conducts a transaction with a provider through a third party marketplace. A database stores information about a relationship between the consumer, the provider and the marketplace. The contact center to routes the consumer to the agent workstation based on the relationship.



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SYSTEM AND METHOD FOR CONTACT CENTER SHARED ECONOMY

BACKGROUND

[001] Contact centers exist to handle sales, service and technical support for businesses offering products and or services to their customers and potential customers. Current communications methods in place in contact centers may focus on individual contacts and manage those contacts individually from the standpoint of incoming and proactive interaction campaigns.

BRIEF DESCRIPTION OF THE DRAWINGS

[002] In association with the following detailed description, reference is made to the accompanying drawings, where like numerals in different figures can refer to the same element.

[003] Figure 1 is an architectural view of a data and communications network supporting association to a contact within a contact center.

[004] Figure 2 is a block diagram of an example architecture for the contact center to support shared economy companies, e.g., by supporting contact center, consumer and provider interrelationships.

[005] Figure 3 is a flowchart of an example logic for the contact center to interact with the consumer and/or provider.

[006] Figure 4 is a flowchart of an example logic for the contact center to engage the consumers and providers.

[007] Figure 5 is a block diagram of an example architecture in which the contact center can create a relationship between different divisions of the same business and/or between different businesses.

DETAILED DESCRIPTION

[008] A system and method for contact centers provides operations for shared economy where contact centers, consumers, providers, and groups of individuals and other entities, can be treated. The contact center setting can apply to various relations, for example, the contact center and the consumer, the contact center and the provider, the contact center and the grouped consumer and provider, the consumer and the provider, etc. The provider can provide products, services, etc., and the contact center or the consumer can sometimes act as the provider. In some cases the consumer may be a buyer and the provider may be a seller.

[009] Figure 1 is an architectural view of a data and communications network supporting association to a contact within a contact center. Commonly assigned U.S. Patent Nos. 8,995,644 and 8,830,876 having embodiments that

1 relate to exposing availability to contact center agents and interacting with
individuals as a contact, respectively, are incorporated by reference in their
entirety herein. Contacts can include consumers, providers, buyers, sellers,
customers, other contact centers, marketplaces, etc. The contact center 99 may
5 have its own business relation both to a consumer and a provider, but the relation
with the provider may be closer, e.g., frequency and duration, than with the
consumer. Overall business success, both for the contact center and the
provider, can depend on how attractive/popular the offered marketplace
experience is for the consumer and/or provider.

10 **[010]** The data and communications network 100 includes a network backbone 101.
Network backbone 101 can represent the Internet backbone including any
connected sub-networks, e.g., adapted for Internet or other protocols. Backbone
101 includes the lines, equipment, and access points that make up the Internet
network and connecting networks as a whole. Therefore, there may be no
15 geographic limitations to the communication network 100.

[011] Data and communications network 100 may be referred to as the Internet
network, although logically illustrated in this example to include an Internet
connected contact center local area network (LAN). The portion of backbone 101
supporting LAN-connected nodes within the contact center domain may be
20 referred to as LAN 101. Where backbone 101 extends beyond the contact center
domain, it may be referred to as Internet 101. LAN 101 supports multiple agent
workstations 112 (1-n) within a contact center domain. Workstations 112 (1-n)
include a LAN-connected personal computer (PC) and a LAN-connected Internet
protocol (IP) telephone for conducting voice communications. In this example,
25 data network telephony (DNT), e.g., Internet protocol network telephony (IPNT) is
practiced. Analog or public switched telephony can also be practiced within the
contact center domain.

[012] LAN 101 supports a Web server 106. Web server 106 includes a non-
transitory physical medium adapted to contain the data and software to enable
30 function as a Web server that server Web pages created using any one of
several markup languages and supporting protocols. Web server 106 includes a
contact center website 109. Website 109 represents an Internet access point for
interacting with and communicating with contact center resources including live
agents operating at workstations 112 (1-n). Website 109 may be hosted by the
35 contact center 99 or by a business entity represented by the contact center 99. A
third party may also host website 109. LAN 101 supports a chat server 105.
Chat server 105 includes a non-transitory physical medium adapted to contain
the data and software, namely chat software (SW) 108, to enable function as a

1 chat server. LAN 101 supports a message server 104 within the domain of the
contact center 99. Message server 104 includes a non-transitory physical
medium that includes the data and software, namely message software (SW)
107, to enable function as a message server. Message server 104 may be an
5 email server or any other type of server that serves messages, notifications, or
other message types.

[013] LAN 101 supports a conference bridge server 115. Conference bridge server
115 includes a non-transitory physical medium that contains the data and
software, e.g., conference bridging SW, to enable function as a conference
10 bridge server. LAN 101 supports a router 103. Router 103 includes a non-
transitory physical medium adapted to contain the data and software to enable
function as a router. Router 103 may rout IP calls, messages, internal calls, and
other data over LAN 103. Interactions may arrive at router 103 from external
networks for destination routing within the contact center 99. The interactions
15 may be connected to an interactive voice response (IVR) server 119, which may
serve to ascertain a purpose of the caller and other information useful in further
routing of the call to final connection, if further routing is needed. For example,
the IVR 119 may provide a menu of option for the customer to select the issue
they are calling about, e.g., by stating the problem and/or pressing a number on
20 their mobile device. Other equipment may be included within the domain of the
contact center 99 and may be supported by LAN 101, including but not limited to
a voice application server, an outbound contact server, etc. The IVR 119 can
also be used during outbound campaigns.

[014] Backbone 101 supports a publicly accessible Web server 110. Web server
25 110 includes a non-transitory physical medium adapted to contain the data and
software (SW) to enable function as a Web server. Web server 110 is hosted
outside of the domain of the contact center 99. Web server 110 hosts one or
more marketplace interaction websites 111. Website 111 may include websites
for shared economy businesses including housing, driving, flying, lending, etc.
30 businesses, e.g., AIRBNB, UBER, LYFT, etc., or any other site that enables
shared economy interactions.

[015] LAN 101 supports a contact management server 113. Contact management
server 113 includes a non-transitory physical medium adapted to contain the data
and software, namely contact management software (SW) 114, to enable
35 function as a contact management server. Universal contact server (UCS) 113
manages individual contacts, e.g., consumers, providers and other contacts
known by the contact center 99. In shared economy a filtered view of the UCS
113 can be shared with the consumer as vendor relationship management (VRM)

1 or the provider as customer relationship management (CRM). In another context
the same person can be either the consumer or the provider, or both the
consumer and the provider, e.g., a re-provider.

5 **[016]** SW 114 includes functions for managing individuals as a contact entity within
the contact center 99. SW 114 includes a function for identifying individuals
including identification of each member according to any existing rules and
member profiles. The server 113 can interface with a database 117 that stores
data on the contacts, e.g., consumers and providers, and stores interactions.
The server 113 can also store data used in category systems, screening rules,
10 services and standard responses.

[017] Figure 2 is a block diagram of an example architecture 200 for the contact
center 99 to support shared economy companies, e.g., by supporting contact
center 99, consumer 204 and provider 206 interrelationships. A third-party
marketplace 202 can provide a shared economy businesses, e.g., for housing,
15 driving, flying, lending, etc. that allow a consumer 204 to rent or borrow goods or
services from a provider 206, rather than the consumer 204 purchasing or owing
the good. In other examples, the consumer may purchase the goods. The
marketplace 202 connects the consumer 204 to the provider 206 to conduct their
transactions, e.g., renting a room, getting a ride, etc.

20 **[018]** The contact center 99 supports different use cases, for example a customer to
customer relationship, e.g., AIRBNB, mediated by contact center 99, and a
customer to business relationship, e.g., car sharing, where multiple customers
share certain property/service. For the customer to customer relationship, one
customer is usually acting as provider 206, and the other as consumer 204. As
25 described in more detail below, the contact center 99 can provide both customer
relationship management (CRM) and vendor relationship management (VRM)
functions for use by provider 206 and consumer 204 respectively. The contact
center 99 can charge a service fee for using the marketplace 202, typically from
the provider 206. The contact center agents can help both providers 206 and
30 consumer 204 on using the marketplace 202, and making sure that determined
rules are followed. Consumers 204, providers 206 and marketplaces 202 can
select among several mediation contact center services, based on a variety of
criteria including popularity, a particular profile, e.g., geo-area, security, user
friendliness, fees, etc. The contact center 99 can offer premium services for a
35 fee, e.g. advanced customer and vendor relationship management (CRM/VRM).

[019] In the customer to business relationship there can be open and closed
communities. In case of an open community the membership is not strictly
limited and in general anyone can join at any time, potentially after passing

1 acceptance check, e.g. car sharing members need a driver's license and to pay
membership fees. Members may be anonymous, e.g., a directory may not be
exposed publicly and members are treated equally. Example cases for closed
membership include timesharing of a vacation house or booking a vacation trip
5 with minimum/maximum attendance limits. In the case of the closed community
the membership is limited, and membership information may be exposed to the
whole team. Voting weight may differ across different members and a
representative quorum may be able to make decisions on behalf of the whole
community.

10 **[020]** The consumer 204, the provider 204 and/or the marketplace 202 can
communicate with the contact center 99 via various communication mediums,
including but not limited to website 111, a call, a text a chat, an email, etc. The
contact center 99 can provide customer service, answer questions by the
consumer 204 or the provider 206, provide statistics to the consumer 204,
15 provider 206 or marketplace 202, etc. Supported media for contact center to
consumer and contact center to provider relations are not necessarily the same
as consumer to provider media. For example, the latter could be a subset of the
former.

20 **[021]** Referring to Figure 2 and Figure 3, Figure 3 is a flowchart of an example logic
for the contact center 99 to interact with the consumer 204 and/or provider 206.
An interaction occurs between the contact center 99 and the consumer 204
(300). For example, the consumer 204 communicates a question to the contact
center 99 about the marketplace 202, or communicates a comment that the
consumer 204 is unsatisfied with a service or a product of the provider 206.
25 Additionally or alternatively, the contact center 99 may reach out to the consumer
204, e.g., during an outbound campaign for the marketplace 202, etc. The
contact center 99 can identify the customer segment (e.g., gold/silver/bronze)
(302) and determine the consumer's concern (304), e.g., via the IVR 119 and/or
800 number that the consumer 204 dialed for purposes of routing the consumer
30 204 to an agent workstation 112 (1-n). The customer segment can be richer in
the contact center 99 for shared economy compared to traditional contact
centers. For example, the customer segment can apply to all relationships
(contact center 99 to consumer 204, contact center 99 to provider 206, provider
206 to consumer 204, etc.), and is not necessarily the same for the various
35 relationships. For example, a particular consumer can be designated gold for
one provider, but not for another.

[022] The contact center 99 considers a business relationship between the
consumer 204 and the provider 206 for routing purposes. For example, the

1 server 113 can access information in database 117 about the business
relationship between the consumer 204 and the provider 206 and/or the contact
center 99 can query the consumer 204 or the provider 206 to determine the
business relationship. The contact center 99 routes the consumer 204 to an
5 agent workstation 112 (1-n) based on the business context of consumer 204 with
the provider 206, in addition to the gold/silver/bronze segment levels and/or
consumer selections on IVR 119 (308). The contact center 99 can also apply the
customer segment for the consumer 204 based on context. For example, renting
a house qualifies the consumer 204 as a gold customer and renting an apartment
10 qualifies the consumer 204 as a silver customer. Context related segments can
also apply to providers 206.

[023] The contact center 99 can consider routing priority if both the consumer 204
and the provider 206 for a particular transaction are waiting in the queue to be
routed to an agent workstation 112 (1-n). The contact center 99 can also monitor
15 and consider a business relation between the consumer 204 and the provider
206 when routing. For example, in some circumstances the consumer can also
act as a provider, and vice versa. In interactions between the contact center 99
and the consumer 204, the consumer/provider context may be considered by the
contact center 99 in routing to agent workstation 112 (1-n). The same can apply
20 to interactions between contact center 99 and the provider 206.

[024] The contact center 99 services the marketplace 202 by orchestrating
interactions between consumers 204 and multiple providers 206. For example,
the contact center 99 can orchestrate the routing of communications between the
contact center 99 and consumer 204, the contact center 99 and provider 206, the
25 consumer 204 and provider 206, etc., and how interaction is created. The
contact center 99 can process multiple businesses offering combined service
where each business is still operating independently, e.g., travel booking, support
for iPhone, etc. In one example, if the consumer 204 is having a problem with
their iPhone, the contact center 99 can check with service provider (e.g., ATT),
30 then the manufacturer of phone hardware and software (APPLE), and then
application provider for software running on the phone, e.g., application bug, to
help solve the problem.

[025] To accommodate VRM and CRM the contact center 99 can maintain a history
of interactions with the consumer 204 and the provider 206 and/or multiple
35 consumers and providers in the database 117. For example, the contact center
99 maintains a list of transactions, ranking of providers, rankings of consumers,
etc. (310), which can be used for future interactions with the consumer 204 and
provider 206 and/or similarly grouped consumers and providers (312). The

1 contact center 99 can provide VRM and CRM to track histories for the consumer
204 and/or the provider 206, and provide that information to the consumer 204
and/or the provider 206 (314). For example, if the consumer 204 rents from
different providers over time the contact center 99 can display a history of
5 consumer transactions over time. Moreover, the provider 206 can contact the
contact center 99, e.g., for help, information, etc. In this way, the contact center
99 can serve to ensure quality is appropriate, ratings and profiles are updated,
etc. VRM and CRM can be restricted to the consumers 204 and providers 206
own business interactions, or contain aggregated information on other consumers
10 204 and providers 206 business operations.

[026] The contact center 99 can also share analytics for consumers 204 and
providers 206 to make informed decisions, e.g., with regard to satisfaction, an
ability to meet needs within a certain time, a quality of service and/or product, a
quality of the renter, etc. Based on the information the contact center 99 can
15 display upsell capabilities on the website 111, e.g., provider provides an UBER
ride to house they are renting. The contact center 99 can offer different deals to
the consumer 204 depending on the consumer profile, e.g., offer lower price
based on good credit, frequent consumer, etc. The contact center 99 can help
the provider 206 to personalize in real-time offers for a given consumer 204, e.g.
20 depending on the consumer's financial situation, e.g., a cheaper car rental rate
for visitors from certain foreign countries, or higher rates if the consumer 204 is
using a computer manufactured by APPLE. The contact center 99 can group
multiple consumers renting at same time or over time virtually group consumers
that entered a department. The marketplace 202 can also provide information
25 about the relationship between the consumer 204 and the provider 206 to the
contact center 99 (316), which the contact center 99 can consider in routing the
consumer to an agent workstation 112 (1-n), making deals to the consumer 204,
etc. (318).

[027] Figure 4 is a flowchart of an example logic for the contact center 99 to engage
30 the consumers 204 and providers 206. Referring also to Figures 2-4, the contact
center 99 can monitor what different consumers 204 and/or providers 206 are
doing on the marketplace 202 (400). Depending on how the marketplace 202 is
organized, the consumer 204 may be able to post questions and notes to the
marketplace 202. The contact center 99 can perform intent analysis based on
35 the questions and notes posted to the marketplace 202 (402). The notes may
relate to the service or product of the provider and/or the service of the contact
center 99, e.g., a complaint about a missing feature in market place. In one
example, the contact center 99 can determine the intent of the consumer through

1 machine learning and text analysis so that the contact center 99 can use the determined intent to help identify a customer concern (e.g., 304 of Figure 3).

5 [028] The consumer 204 may contact the marketplace 202 via website 111, e.g., by mobile engagement provided by the contact center 99. The contact center 99 can dynamically query the consumer 204, e.g., via a display of the device of the consumer 204, for example with a 'do you want' prompt 208 regarding whether consumer 204 would like to communicate with the provider 206, e.g., via voice or chat (404). The device can include a mobile phone, a laptop, a tablet, etc. The query can be accomplished by the contact center 99 monitoring the provider's presence and having the provider's buy-in for contact establishment. If the consumer has a concurrently pending relationships with several providers and multiple of them are available for contact with consumer, then the contact center 99 can decide on best fit, e.g., determined from the consumer's history, and offer the contacts in respective order. Additionally or alternatively, when the provider 10 206 logs into the website 111, the contact center 99 can prompt the provider 206 regarding whether the provider 206 wishes to talk to the consumer and/or group of consumers, e.g., multiple people trying to rent the house or who did rent the house over the last year, etc. The contact center 99 can consider multiple consumers 104 acting as group in the consumer-provider relationship.

20 [029] Additionally or alternatively, an agent workstation 112 (1-n) can automatically contact the consumer 204 or provider 206, e.g., based on the intent analysis (406). The contact center 99 can also provide conversations with a determined group of consumers 204 or providers 206 in this way. If business process outsourcing (BPO) is implemented, contact center 99 resources can be shared. For example, one contact center can provide technical support in U.S., and determined interactions can be sent to an overseas contact center. Additionally or alternatively, the contact center 99 can group the consumer 204 and the provider 206 and treat the provider 206 as one entity, e.g., for purposes of processing, query resolution, etc.

30 [030] Figure 5 is a block diagram of an example architecture 500 in which the contact center 99 can create a relationship between different divisions of the same business and/or between different businesses. For example purposes, company one 202 (a) is a car ride service called UBER and company two 202 (b) is a car ride service called LYFT. The contact center 99 can offer the best deal to the consumers 204 (a-n), e.g., potential passengers, across multiple different providers 206 (a-n), e.g., drivers, e.g., by monitoring the deals being offered by the different providers 206 (a-n). When the passenger requests a ride, the contact center 99 can pick a marketplace 202 (a) or 202 (b), e.g., based on a 35

1 location of the passengers and drivers, a segment of the passenger, a cost of the
providers, etc. to provide service options to the passengers across multiple
marketplaces and multiple providers. The server 113 can perform the analysis
based on the information collected and stored in database 117 to provide the
5 service options. Therefore, the contact center 99 can act as a mediator between
the consumer 204 and the provider 205, e.g., for security purposes the provider
206 may want to be contacted without a personal phone number being exposed.
The contact center 99 can also act as the mediator in addressing any problems
between the consumer 204 and the provider 206, e.g., as described above.

10 **[031]** The contact center 99 and accompanying systems may be deployed in
equipment dedicated to the enterprise or third-party service provider, and/or
deployed in a remote computing environment such as, for example, a private or
public cloud environment with infrastructure for supporting multiple contact
centers for multiple enterprises. The various components of the contact center
15 system may also be distributed across various geographic locations and
computing environments and not necessarily contained in a single location,
computing environment, or even computing device.

[032] The systems and methods described above may be implemented in many
different ways in many different combinations of hardware, software, firmware, or
any combination thereof. In one example, the systems and methods can be
20 implemented with a processor and a memory, where the memory stores
instructions, which when executed by the processor, causes the processor to
perform the systems and methods. The processor may mean any type of circuit
such as, but not limited to, a microprocessor, a microcontroller, a graphics
processor, a digital signal processor, or another processor. The processor may
25 also be implemented with discrete logic or components, or a combination of other
types of analog or digital circuitry, combined on a single integrated circuit or
distributed among multiple integrated circuits. All or part of the logic described
above may be implemented as instructions for execution by the processor,
controller, or other processing device and may be stored in a tangible or non-
30 transitory machine-readable or computer-readable medium such as flash
memory, random access memory (RAM) or read only memory (ROM), erasable
programmable read only memory (EPROM) or other machine-readable medium
such as a compact disc read only memory (CDROM), or magnetic or optical disk.
35 A product, such as a computer program product, may include a storage medium
and computer readable instructions stored on the medium, which when executed
in an endpoint, computer system, or other device, cause the device to perform
operations according to any of the description above. The memory can be

1 implemented with one or more hard drives, and/or one or more drives that handle
removable media, such as diskettes, compact disks (CDs), digital video disks
(DVDs), flash memory keys, and other removable media.

5 **[033]** The systems and methods can also include a display device, an audio output
and a controller, such as a keyboard, mouse, trackball, game controller,
microphone, voice-recognition device, or any other device that inputs
information. The processing capability of the system may be distributed among
multiple system components, such as among multiple processors and memories,
10 optionally including multiple distributed processing systems. Parameters,
databases, and other data structures may be separately stored and managed,
may be incorporated into a single memory or database, may be logically and
physically organized in many different ways, and may implemented in many
ways, including data structures such as linked lists, hash tables, or implicit
storage mechanisms. Programs may be parts (e.g., subroutines) of a single
15 program, separate programs, distributed across several memories and
processors, or implemented in many different ways, such as in a library, such as
a shared library (e.g., a dynamic link library (DLL)). The DLL, for example, may
store code that performs any of the system processing described above. The
systems and methods can be implemented over a cloud.

20 **[034]** While various embodiments have been described, it can be apparent that
many more embodiments and implementations are possible. Accordingly, the
embodiments are not to be restricted.

1 Claims:

1. A system, comprising:
a contact center to provide an interaction between a consumer and an agent
workstation of the contact center, where the consumer conducts a transaction with a
5 provider through a third party marketplace;
a database to store information about a relationship between the consumer,
the provider and the marketplace; and
the contact center to route the consumer to the agent workstation based on
the relationship.

10 2. The system of claim 1, further comprising an interactive voice response
server to determine a concern of the consumer, where the routing to the agent
workstation is further based on the concern.

15 3. The system of claim 2, where the contact center dynamically queries
the consumer regarding whether the consumer wants to communicate with the
provider via voice or chat based on the concern.

20 4. The system of claim 2, further comprising machine learning to
determine an intent of the consumer, where the concern is determined from the
consumer intent.

25 5. The system of claim 4, where the contact center automatically contacts
the provider based on the consumer intent.

6. The system of claim 1, further comprising a customer segment, where
the routing to the agent workstation is further based on the customer segment.

30 7. The system of claim 1, where the interaction is initiated by the
consumer.

8. The system of claim 1, where the interaction is initiated by the contact
center.

35 9. The system of claim 8, where the contact center upsells to the
consumer based on the relationship to the provider.

1 10. The system of claim 1, where the information further comprises a history of consumer transactions over time.

5 11. The system of claim 10, where the contact center displays to the provider the history of consumer transactions over time.

 12. The system of claim 1, further comprising the contact center to mediate a price between the consumer and the provider over multiple marketplaces.

10 13. A method, comprising:
 providing, with a processor, an interaction between a consumer and an agent workstation of the contact center, where the consumer conducts a transaction with a provider through a third party marketplace;
 storing information about a relationship between the consumer and the
15 provider;
 grouping the consumer and the provider based on the information; and
 routing the consumer to the agent workstation based on the grouping.

20 14. The method of claim 13, further comprising determining a concern of the consumer, where the routing to the agent workstation is further based on the concern.

25 15. The method of claim 14, dynamically querying the consumer regarding whether the consumer wants to communicate with the provider via voice or chat based on the concern.

 16. The method of claim 14, determining an intent of the consumer, where the concern is determined from the consumer intent.

30 17. The method of claim 16, further comprising automatically contacting the provider based on the consumer intent.

 18. The method of claim 13, further routing the consumer to the agent workstation based on a customer segment.

35 19. The method of claim 13, further comprising upselling to the consumer based on the grouping to the provider.

1 20. The method of claim 13, further comprising the contact center to
mediate a price between the consumer and the provider over multiple marketplaces.

5 21. A system substantially as hereinbefore described with reference to the
accompanying drawings.

 22. A method substantially as hereinbefore described with reference to
accompanying drawings.

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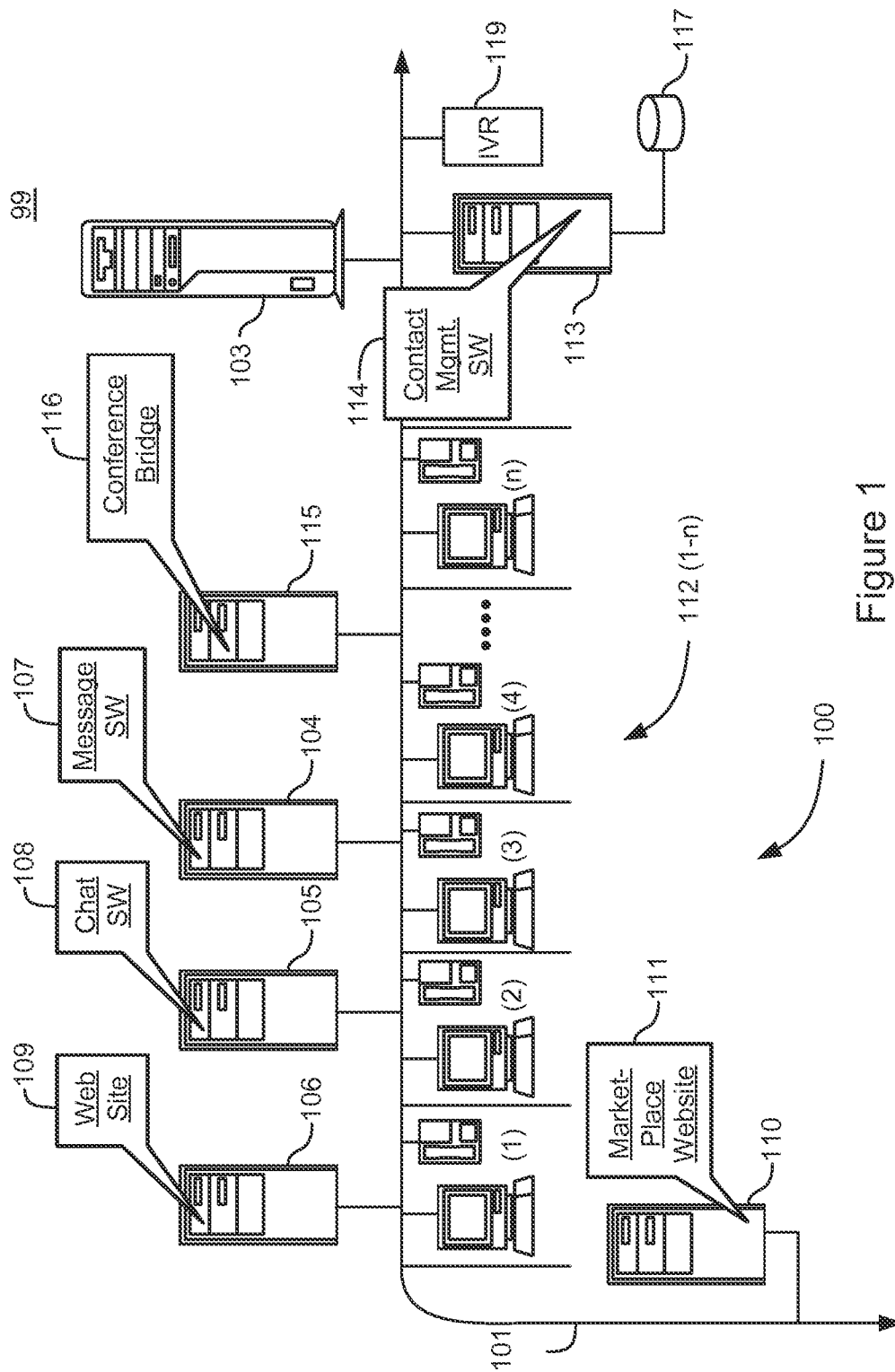
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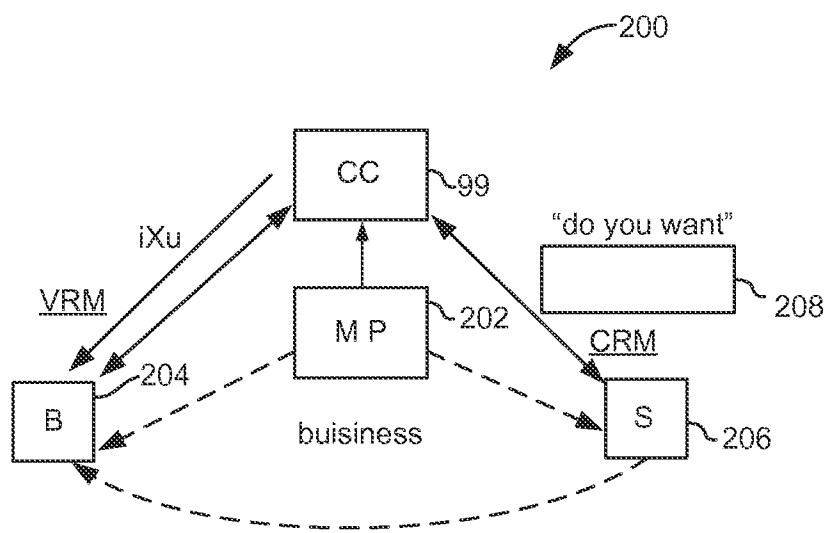


Figure 2

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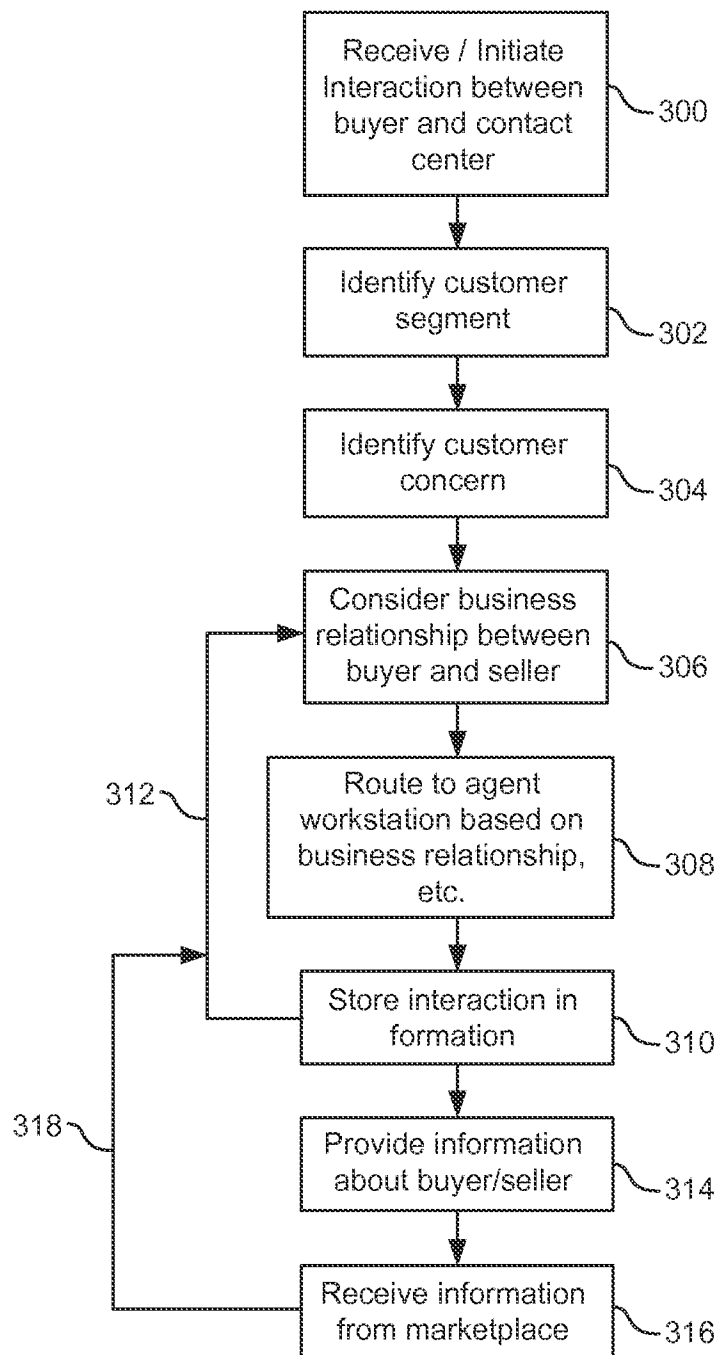


Figure 3

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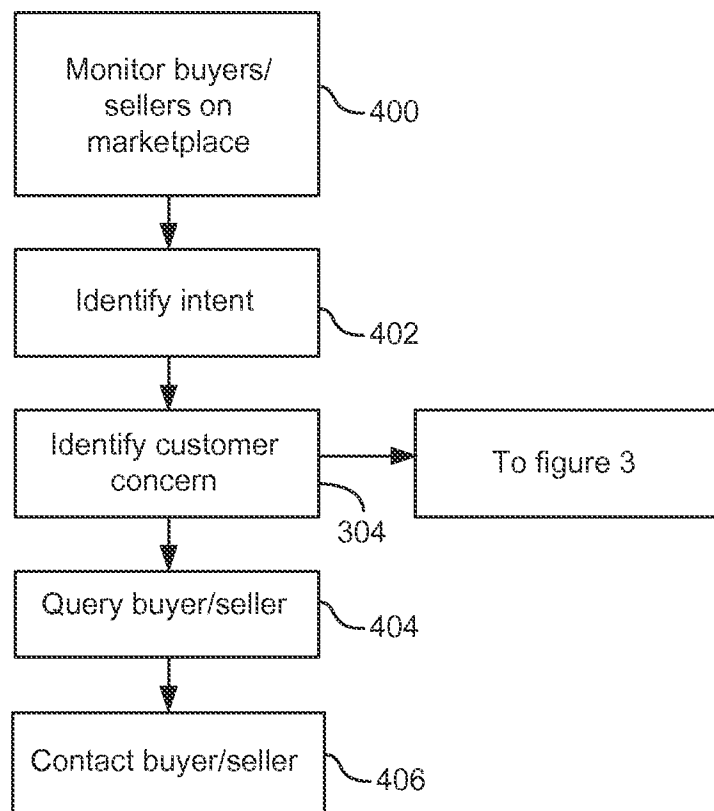
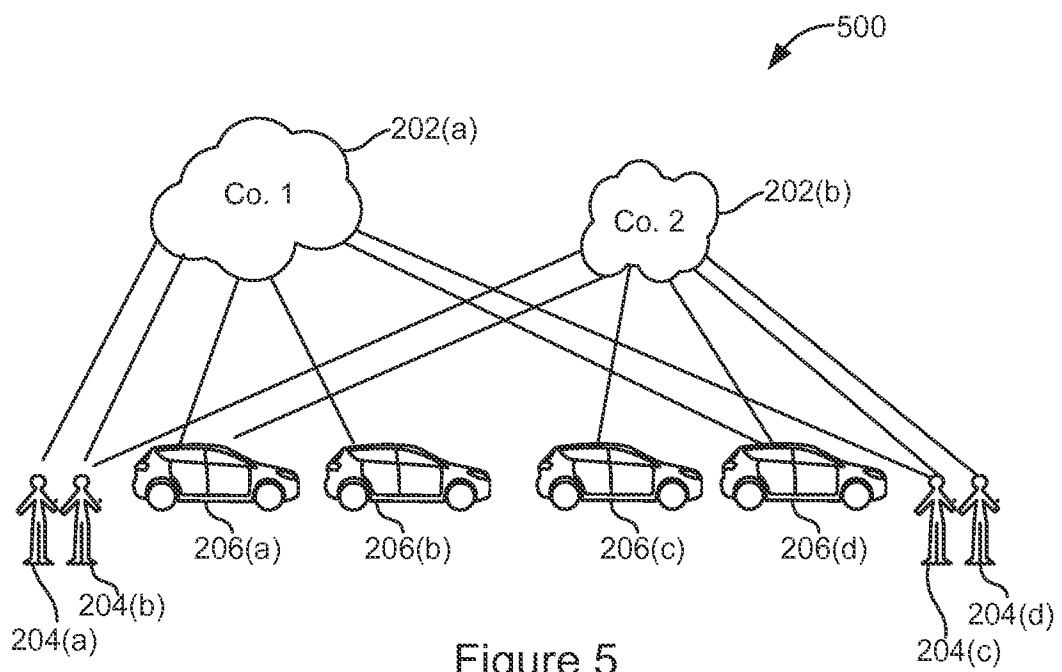


Figure 4

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INTERNATIONAL SEARCH REPORTInternational application No.
PCT/US2016/041623**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 21-22
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
Claims 21-22 rely on reference to drawings to the extent they are so unclear that no meaningful search can be made.
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of any additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2016/041623**A. CLASSIFICATION OF SUBJECT MATTER****G06Q 30/02(2012.01)i, H04M 3/51(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G06Q 30/02; H04M 15/10; H04M 5/00; G06F 15/21; H04M 3/00; H04M 3/42; H04M 7/00; H04M 3/54; H04M 3/51

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: contact, center, marketplace, provider, relationship, group, route, customer

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2011-0002453 A1 (MATTHEW FINKLE) 06 January 2011 See abstract, paragraphs [0007],[0024], claims 1,6 and figure 1.	1-20
Y	US 6714642 B2 (NITIN DHIR et al.) 30 March 2004 See abstract, column 5, lines 47-60, column 11, lines 12-25, claims 1,4 and figure 6.	1-20
Y	US 2008-0247529 A1 (WILLIAM F. BARTON et al.) 09 October 2008 See abstract, paragraphs [0039]-[0040], claims 18-19 and figures 1,3.	2-5,13-20
A	US 6070142 A (CHARLES MCDONOUGH et al.) 30 May 2000 See abstract, column 6, line 21- column 7, line 10, claims 1,3-6 and figures 1-3.	1-20
A	WO 2014-145149 A1 (GENESYS TELECOMMUNICATIONS LABORATORIES, INC.) 18 September 2014 See abstract, claims 1-3 and figure 1.	1-20



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

12 October 2016 (12.10.2016)

Date of mailing of the international search report

12 October 2016 (12.10.2016)

Name and mailing address of the ISA/KR

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2016/041623

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2011-0002453 A1	06/01/2011	US 8644474 B2	04/02/2014
US 6714642 B2	30/03/2004	US 2003-0108183 A1 US 6553113 B1 US 7536002 B1	12/06/2003 22/04/2003 19/05/2009
US 2008-0247529 A1	09/10/2008	None	
US 6070142 A	30/05/2000	None	
WO 2014-145149 A1	18/09/2014	AU 2014-233357 A1 CA 2917294 A1 CN 105229687 A EP 2973312 A1 EP 2973312 A4 KR 10-2015-0131306 A US 2014-0270108 A1 US 2014-0270109 A1 US 2014-0314225 A1 US 8767948 B1 US 9008283 B2 US 9386152 B2	05/11/2015 18/09/2014 06/01/2016 20/01/2016 23/03/2016 24/11/2015 18/09/2014 18/09/2014 23/10/2014 01/07/2014 14/04/2015 05/07/2016