



US007907933B1

(12) **United States Patent**  
**Trandal et al.**

(10) **Patent No.:** **US 7,907,933 B1**  
(45) **Date of Patent:** **\*Mar. 15, 2011**

(54) **CALL ROUTING APPARATUS**

(75) Inventors: **David S. Trandal**, Santa Barbara, CA (US); **David J. Brahm**, Santa Barbara, CA (US)

(73) Assignee: **Callwave, Inc.**, Santa Barbara, CA (US)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 674 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **11/861,171**

(22) Filed: **Sep. 25, 2007**

**Related U.S. Application Data**

(63) Continuation of application No. 11/212,536, filed on Aug. 26, 2005, now Pat. No. 7,292,841, which is a continuation of application No. 10/106,517, filed on Mar. 22, 2002, now Pat. No. 6,968,174.

(60) Provisional application No. 60/278,570, filed on Mar. 22, 2001, provisional application No. 60/309,142, filed on Jul. 30, 2001.

(51) **Int. Cl.**

**H04M 11/00** (2006.01)  
**H04M 15/00** (2006.01)

(52) **U.S. Cl.** ..... **455/406**; 455/405; 379/114.01; 379/114.25

(58) **Field of Classification Search** ..... 455/405-408, 455/415-417; 379/111, 112.01, 114.01, 379/114.14, 114.24, 114.25, 127.01, 133-134  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

4,994,926 A 2/1991 Gordon et al.  
5,291,302 A 3/1994 Gordon et al.

5,459,548 A 10/1995 Matsuda et al.  
5,459,584 A 10/1995 Gordon et al.  
5,467,388 A 11/1995 Redd, Jr. et al.  
5,533,102 A 7/1996 Robinson et al.  
5,533,106 A 7/1996 Blumhardt  
5,577,111 A 11/1996 Iida et al.  
5,651,054 A 7/1997 Dunn et al.  
5,668,861 A 9/1997 Watts  
5,805,587 A 9/1998 Norris et al.  
5,809,128 A 9/1998 McMullin  
5,825,867 A 10/1998 Epler et al.  
5,835,573 A 11/1998 Dee et al.  
5,884,032 A 3/1999 Bateman et al.  
5,995,603 A 11/1999 Anderson  
6,031,896 A 2/2000 Gardell et al.  
6,035,031 A 3/2000 Silverman  
6,169,795 B1 1/2001 Dunn et al.  
6,175,622 B1 1/2001 Chiniwala et al.

(Continued)

**FOREIGN PATENT DOCUMENTS**

EP 1 120 954 8/2001

(Continued)

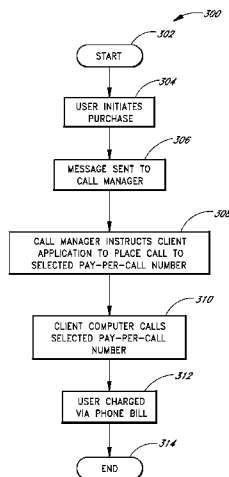
*Primary Examiner* — Michael T Thier

(74) *Attorney, Agent, or Firm* — Knobbe, Martens, Olson & Bear LLP

(57) **ABSTRACT**

The present invention relates generally to telecommunications, and in particular to systems and methods for routing and placing telephone calls. In one embodiment, a call manager system is configured to place a call to a pay-per-call service, or to cause such a call to be placed by a user computer terminal, in response to a user initiating a purchase transaction over a computer network. In addition, the call may include billing information, such as the user's phone number, which is provided to the pay-per-call service so that the user can be billed for the call in an appropriate amount.

**17 Claims, 4 Drawing Sheets**



# US 7,907,933 B1

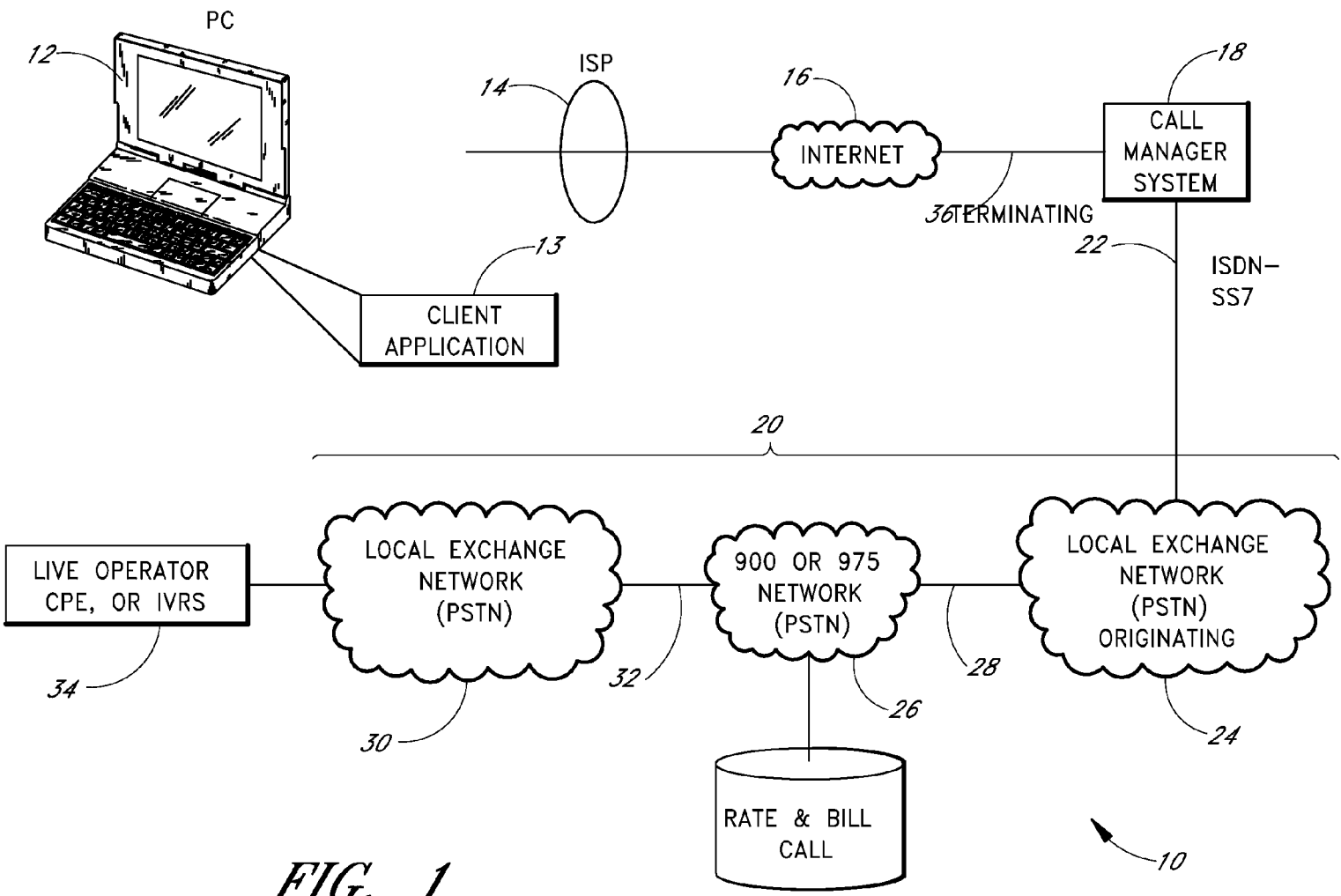
Page 2

## U.S. PATENT DOCUMENTS

6,208,638	B1	3/2001	Rieley et al.	6,879,677	B2	4/2005	Trandal et al.
6,282,276	B1	8/2001	Felger	6,898,275	B2	5/2005	Dolan et al.
6,304,565	B1	10/2001	Ramamurthy	6,968,174	B1	11/2005	Trandal et al.
6,310,939	B1	10/2001	Varney	6,981,214	B1	12/2005	Miller et al.
6,345,090	B1	2/2002	Walker et al.	7,103,167	B2	9/2006	Brahm et al.
6,350,066	B1	2/2002	Bobo, II	2001/0037264	A1	11/2001	Husemann et al.
6,353,660	B1	3/2002	Burger et al.	2002/0010616	A1	1/2002	Itzhaki
6,405,035	B1	6/2002	Singh	2002/0097710	A1	7/2002	Burg
6,430,274	B1	8/2002	Winstead et al.	2002/0176558	A1	11/2002	Tate et al.
6,438,222	B1	8/2002	Burg	2003/0063731	A1	4/2003	Woodring
6,477,246	B1	11/2002	Dolan et al.	2003/0123629	A1	7/2003	Hussain et al.
6,505,163	B1	1/2003	Zhang et al.	2003/0156700	A1	8/2003	Brown et al.
6,549,612	B2	4/2003	Gifford et al.	2004/0010472	A1	1/2004	Hilby et al.
6,564,321	B2	5/2003	Bobo, II	2005/0265322	A1	12/2005	Hester
6,643,034	B1	11/2003	Gordon et al.				
6,658,100	B1	12/2003	Lund				
6,661,785	B1	12/2003	Zhang et al.				
6,690,785	B1	2/2004	Stetler et al.				
6,738,461	B2	5/2004	Trandal et al.				
6,751,299	B1	6/2004	Brown et al.				
6,785,021	B1	8/2004	Gordon et al.				
6,857,074	B2	2/2005	Bobo, II				

## FOREIGN PATENT DOCUMENTS

JP	10-513632	12/1998
JP	11-506292	6/1999
JP	2001-168989	6/2001
WO	WO 97/26749	7/1997
WO	00/60840	10/2000
WO	WO 01/76210	10/2001



*FIG. 1*

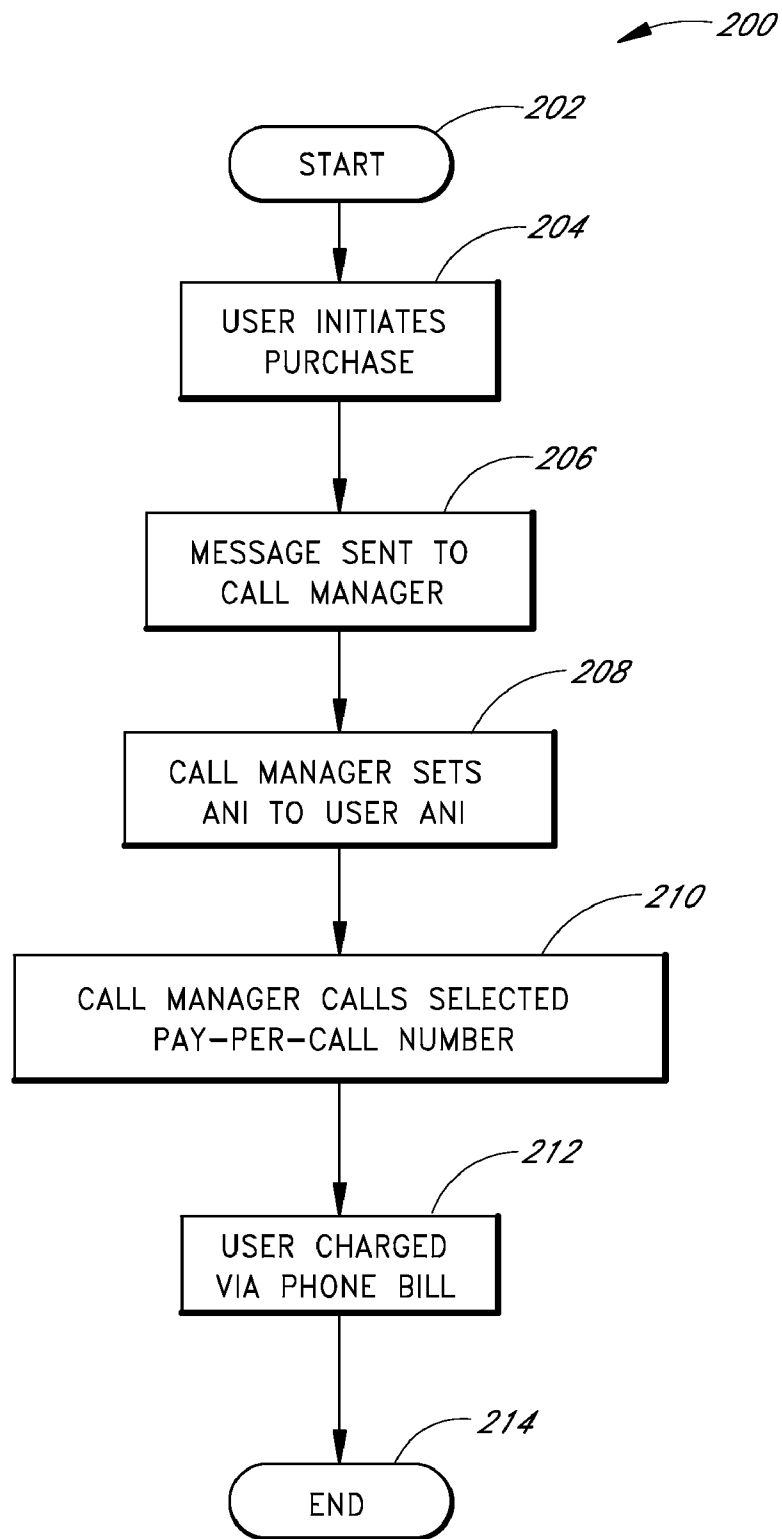


FIG. 2

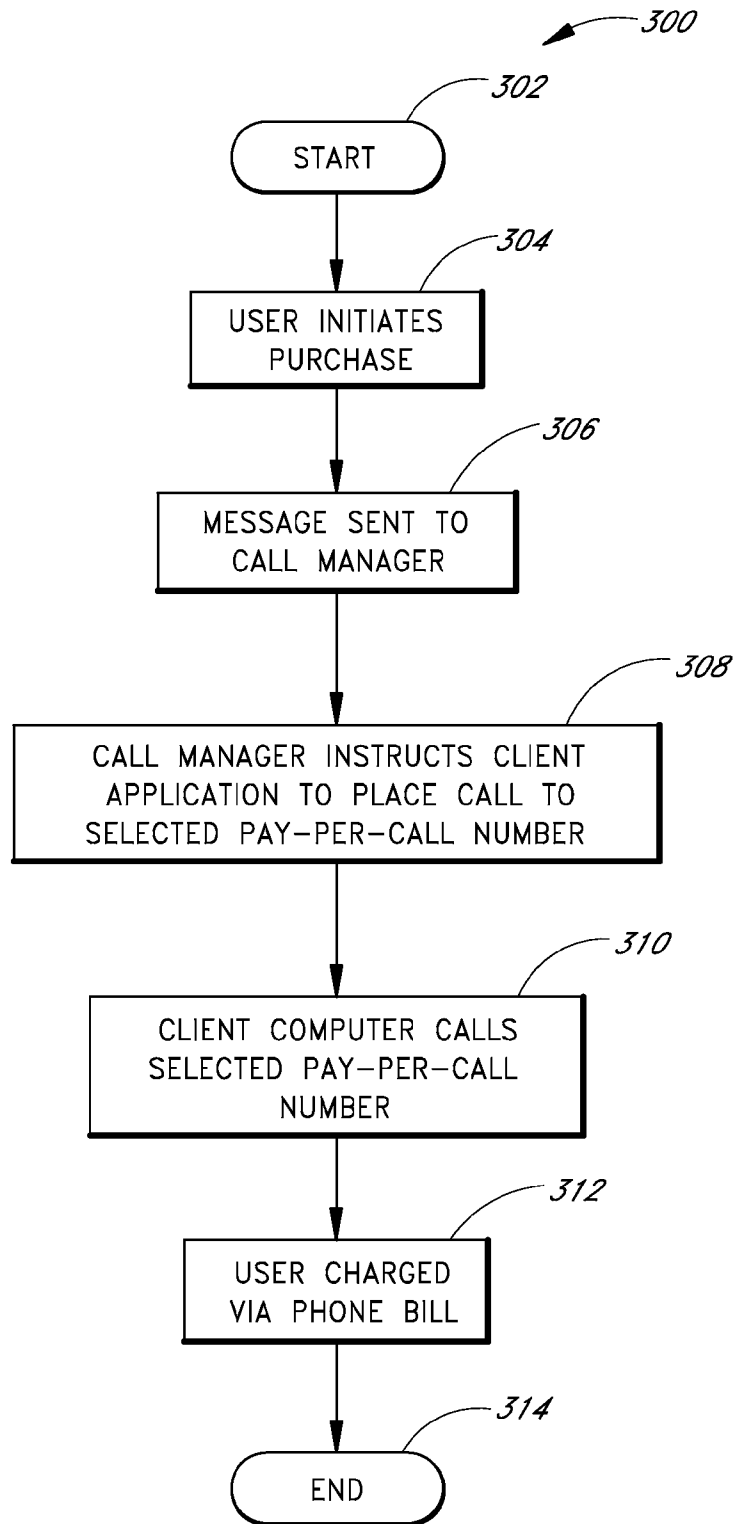


FIG. 3

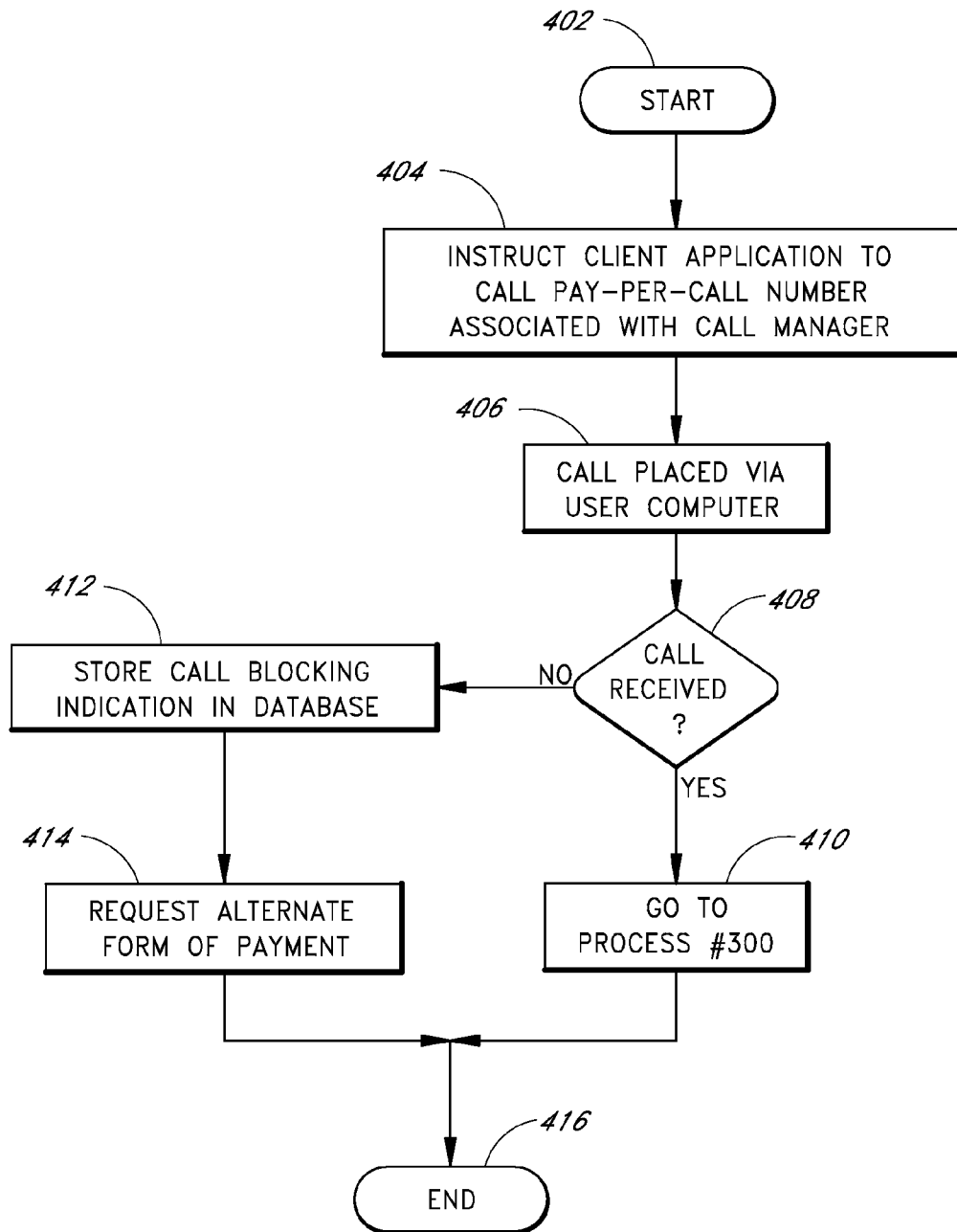


FIG. 4

## CALL ROUTING APPARATUS

## PRIORITY CLAIM

This application claims the benefit under 35 U.S.C. 119(e) of U.S. Provisional Application No. 60/278,570, filed Mar. 22, 2001, and U.S. Provisional Application No. 60/309,142, filed Jul. 30, 2001, and is a continuation application of U.S. application Ser. No. 11/212,536, filed Aug. 26, 2005, which is a continuation application of U.S. application Ser. No. 10/106,517, filed Mar. 22, 2002, all of which are incorporated herein by reference in their entirety.

## BACKGROUND OF THE INVENTION

## 1. Field of the Invention

The present invention relates generally to telecommunications, and in particular to systems and methods for routing and placing telephone calls.

## 2. Description of the Related Art

The conventional public switched telephone network (PSTN) provides for pay-per-call network services via one or more designated numbers, such as a 900 or 976 number, whereby consumers can call such a designated number and be charged a flat rate or per minute charge for a service. For example, the service may be providing entertainment information, sports information, or the like. The fee associated with calling such designated numbers is greater than the cost of simply transmitting the call. However, conventional commerce systems fail to provide an automated apparatus that places or routes calls to such pay-per-call numbers or services as part of an online purchase transaction. Thus, consumers are deprived of making secure online purchases using the pay-per-call service.

## SUMMARY OF THE INVENTION

The present invention is related to systems and methods for routing and placing telephone calls. Embodiments of the present invention provide consumers with a reliable, secure, and convenient method of utilizing a telecommunications network to pay for goods or services on a one-time or recurring basis.

In particular, embodiments of the present invention provide apparatus and methods for a system connected to the PSTN to place an authorized call to a pay-per-call number, such as a 900 or 976 number, or the like, on behalf of a user to purchase a good or service. Advantageously, embodiments of the disclosed systems and methods optionally eliminate the need for a consumer to place a call to a pay-per-call service directly. This is in contrast to conventional systems wherein a consumer uses a home telephone to directly call a 900 or 976 pay-per-call telephone number.

Optionally, in one embodiment a user does not have to communicate private billing information, such as credit card or checking account information, to pay the provider of the good or service. The resulting security and convenience of this payment method can further encourage transactions involving the purchase or lease of goods or services, benefiting both the user and the service provider or merchant. In addition, the offer and/or payment options can be specifically tailored to the consumer. In addition, embodiments of the present invention enable a merchant or service provider to discover whether a user has blocked pay-per-call services and to disallow this payment method or instruct the user in ways to unblock these services.

In one embodiment, when a user is transacting an online purchase transaction using a computer terminal and wants to charge the purchase price to the user's phone bill, a message is transmitted to a remote call manager system. The message can include information related to the purchase price and an ANI associated with a phone line of the user. The remote call manager system sets an ANI of a call service phone line be the same as the user ANI. The call manager system then calls a pay-per-call service via the call service phone line using the user ANI. Thus, the call manager is in effect making the call on behalf of the user by appearing to be the user, even if the call placed by the call manager system is originating from a network location out of the user's local calling area or state. The user is then billed for the call on the user's phone bill in an amount corresponding to the purchase price.

In another embodiment, in response to a user initiating an online purchase via a client terminal, a call manager system transmits over a computer network, such as the Internet, instructions to the client terminal to schedule an outcall from the client terminal to a pay-per-call phone number. The client terminal will then place a call to the pay-per-call phone number in accordance with the instructions.

Further objects and advantages of the invention will be brought out in the following portions of the specification, wherein the detailed description is for the purpose of fully disclosing preferred embodiments of the invention without placing limitations thereon.

## BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will be more fully understood by reference to the following drawings, which are for illustrative purposes only:

FIG. 1 illustrates an example system that can be used in accordance with one embodiment of the present invention.

FIG. 2 illustrates an example method of routing calls.

FIG. 3 illustrates another example method of routing calls.

FIG. 4 illustrates an example method of detecting whether a user has pay-per-call blocking.

## DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

The present invention is related to systems and methods for routing and placing telephone calls. As will be described in greater detail below, embodiments of the present invention provide apparatus and methods for initiating a telephone call using the public switched telephone network (PSTN) to a pay-per-call number on behalf of a user in response to a user operation received over a computer network, such as the Internet.

Referring to FIG. 1, a telecommunications system **10** is shown utilizing an example embodiment of the present invention. In this example embodiment, a subscriber or other user employs a networked terminal, such as a personal computer (PC) **12**, an interactive television, a personal digital assistant, a cellular phone equipped with a browser, or the like, to access a computer network **16**, such as the Internet or the like.

Thus, for example, the terminal **12** and/or a call manager system **18** discussed below, can correspond to a uniprocessor or multiprocessor machine. Additionally, the terminal **12** and/or a call manager system **18** discussed below, can include an addressable storage medium or computer accessible medium, such as random access memory (RAM), an electronically erasable programmable read-only memory (EEPROM), masked read-only memory, one-time programmable memory, hard disks, floppy disks, laser disk players, digital

video devices, Compact Disc ROMs, DVD-ROMs, other optical media, video tapes, audio tapes, magnetic recording tracks, electronic networks, and other techniques to transmit or store electronic content such as, by way of example, programs and data.

In one embodiment, the terminal **12** and/or a call manager system **18** discussed below, is equipped with a network communication device such as a network interface card, a modem, Infra-Red (IR) port, a wireless network interface, or other network connection device suitable for connecting to a network. For example, the terminal **12** and/or the call manager system **18**, can include a dial-up, narrow-band, modem or a dedicated, broadband, modem that connects to a data communication service, such as that provided by an Internet Service Provider (ISP) or Commercial Online Service **14**. Furthermore, the terminal **12** and/or the call manager system **18** can execute an appropriate operating system, such as Linux, Unix, Microsoft® Windows® 3.1, Microsoft® Windows® 95, Microsoft® Windows® 98, Microsoft® Windows® NT, Microsoft® Windows® 2000, Microsoft® Windows® Me, Microsoft® Windows® XP, Apple® MacOS®, IBM® OS/2®, Microsoft® Windows® CE, Palm OS®, or Sun Solaris®. The appropriate operating system may advantageously include a communications protocol implementation, which handles incoming and outgoing message traffic passed over the network. In other embodiments, while the operating system may differ depending on the type of terminal, the operating system may continue to provide the appropriate communications protocols necessary to establish communication links with the network.

While online to the Internet **16** or other network, the user may be presented with one or more offers to purchase a product or a service transmitted over the Internet to the user. The phrase “purchase” as used herein includes a lease or licensing of a good or service. The offers may come in a plurality of forms such as via an email, a banner ad, a web page, and/or a collection of some or all of these forms. By way of example, the offers may be provided in response to a user visiting a specific Web site or by accessing a given network resource or URL. A user may initiate a purchase of a product or service by filling in purchase data, activating a purchase link or other command, by accessing a specific network resource, or by otherwise authorizing a purchase.

If a user makes a purchase decision and authorizes the merchant or service provider to place the charge for the good or service on their phone bill, a message is sent over the Internet **16** to the call manager system **18**. As discussed above, the user can complete a web form or activate a link in an email message. The web form or form associated with the email link may ask the user if the user wants to pay for the purchase via their phone bill. If the user indicates that the purchase price is to be billed to the user’s phone bill, a corresponding message is sent by the merchant or service provider to the call manager system **18**. In one embodiment, the web form requests that the user provide a telephone number or account number to which the purchase is to be billed. The merchant or service provider can verify via a merchant user database or the like that the user has permission to authorize a charge to the provided number.

The call manager system **18** includes a user database that stores user registration information, identification information, account information, billing information and the like. In one embodiment, the call manager is implemented using one or more servers. The call manager system **18** is connected to the Public Switched Telephone Network **20** by means of a trunk interface **22** and to the Internet **16** via data connection **36**.

In one example embodiment, the message sent in response to the purchase request can contain one or more billing attributes or parameters. For example, the message can contain an account identifier, such as a phone number, user identifier, password, or other identifier. Other information which may be passed in the message can include the amount of the charge, whether the charge is recurring, such as whether the charge is a daily, weekly, monthly, or a one-time charge, and the like. In one embodiment, the call manager system **18** immediately, or at a scheduled or a delayed time, originates a call over trunk connection **22** to the Public Switched Telephone Network **20** to a “900”, “976” or other pay-per-call number. As used herein, the terms “900 number”, “900 service”, “900/976 service”, and the like, denote all such pay-per-call numbers and services. Thus, the invention is not limited to a particular pay-per-call service, but is generally applicable to such services.

The call may be to a pay-per-call number that is associated with a specific cost that corresponds to the price of the good or service being purchased. For example, in response to a user’s request to purchase a \$10 item, the call manager system **18** calls a number for which there is a \$10 charge per call. Similarly, in response to a user’s request to purchase a \$15 item, the call manager system **18** calls a number for which there is a \$15 charge per call. Alternatively, in response to a user purchase instruction, the call manager system **18** places a call to a pay-per-call number that can vary based on a database query and an interaction with the billing and rating system. Using still another process, in response to a user purchase instruction, the call manager system **18** places a call to a pay-per-call number that is associated with a specific cost per minute. For example, in response to a user’s request to purchase a \$10 item, the call manager system **18** places a call for 10 minutes to a number for which there is a \$1 per minute charge.

By way of example, the call manager system **18** delivers, over a signaling channel, such as an SS7 signaling channel, information identifying the origin of the call through a service known as Automatic Number Identification (ANI), or using other types of signaling information, such as a charge-to-number. The ANI corresponds to the caller’s phone number. ANI is well known to one of ordinary skill in the art of telephony systems and will not be described further here.

In one example embodiment, the call manager system **18** modifies the ANI that would normally be associated with a call manager system phone line by setting the ANI to be the ANI (e.g., phone number) of the user who has authorized the purchase. Thus, in one embodiment, the call manager system **18** is in effect making the call on behalf of the user by appearing to be the user, even if the call placed by the call manager system **18** is originating from a network location out of the user’s local calling area or state.

Optionally, as illustrated in FIG. 1, the present invention can be utilized with a Common Channel Signaling system, such as Signaling System 7 (SS7), having separate voice/user data and signaling channels. In addition, the present invention can be used with other signaling methods, such as ISDN, Advanced Intelligent Network (AIN), and/or MF inband signaling. However, the invention is not limited to these methods and contemplates other methods in which ANI or similar signaling information can be passed.

The originated call initiated by the call manager system **18** transits an Originating Local Exchange Network (OLEN) **24** to a pay-per-call services network **26** through an interconnecting trunk **28**, and eventually to a Terminating Local Exchange Network (TLEN) **30** through an interconnecting trunk **32**. The TLEN **30** is optionally connected to a live



5

operator or to customer premise equipment **34** operated by a service provider, a merchant, an online merchant, or a third party on behalf of the merchant or service provider. The process of a phone call or interworkings of a pay-per-call service network are well known to one of ordinary skill and will not be described here.

In one embodiment, rather than using a live operator to answer the call placed by the call manager system **18**, the call is answered by an Interactive Voice Response System (IVRS) operated by a service provider or a merchant. The PSTN connects to the IVRS via a telephone trunk. The telephone trunk has an associated signaling channel. The signaling channel is provided to communicate the ANI to the IVRS to enable the IVRS to customize the interaction as described below. The IVRS, connected to the phone network, can collect and store the ANI information for the call.

The collected and stored ANI can be used to identify the user for post bill auditing, or to customize the interaction, such as to selectively restrict answered calls to known users, to identify the billed amount, play audio announcements, record voice messages, collect and store touch-tone responses, and transfer calls. Similarly, the ANI can be used to identify the user to determine what rate or price the user is entitled to for a good or service. For example, some users may be entitled to a discounted rate. The IVRS system **34** can be included in the call manager system **18** or can be a separate system from the call manager system **18**.

The pay-per-call service then bills the user for the purchased services or goods based on the length of the call, a flat rate charge, or using customized or proprietary signaling information as discussed above sent from the IVRS into the pay-per-call services network **26**. The charge may appear on the user's local or long distance carrier's bill for the user. The interworking of a pay-per-call service are well known and not described here.

FIG. 2 illustrates one example process **200** of placing a call to a pay-per-call service. Starting at start state **202**, the process **200** proceeds to state **204**, wherein a user initiates a purchase and indicates that the purchase price is to be billed to the user's phone bill. At state **206** a message is sent to the call manager system, including the user's phone number and the purchase price amount to be charged to the user's phone bill. At state **208** the call manager sets an ANI associated with an outbound call to be the same as the user's ANI. At state **210** the call manager system selects and calls an appropriate pay-per-call number using the user's ANI. Thus, it will appear to the pay-per-call service that the user is placing the call. The pay-per-call number can be selected based on, or to correspond with the amount of the purchase price. At state **212** the pay-per-call services causes the purchase price amount to be charged to the user via the user's long distance or local phone bill. The process **200** ends at state **214**.

In another embodiment, the call manager system **18** directs a call to the pay-per-call network **28** via the PC or other terminal **12** without manual intervention by the user or other persons. In this embodiment, the user utilizes the networked computer **12** to connect to a data communication service via a dial-up or dedicated connection, such as that provided by the ISP **14**. If the user makes a purchase decision while online and authorizes the merchant or service provider to place the charge for the good or service on the phone bill of the user, this event is logged in the call management system **18**. For example, a user can complete a web form or activate a link in an email message, which causes a message to be sent to the call manager system **18**, or the user can engage in a direct interaction with the call management system **18** database. For example, the user can make purchases directly from the

6

operator of the call management system **18** which will then arrange to have the corresponding charge appear on the user's phone bill. A message is then sent from the networked computer **12** to the call manager system **18**.

Upon receipt of the message or transaction event, the call manager system **18** instructs a networked computer client application **13** over the Internet to schedule an outcall to a pay-per-call phone number. The client application **13** can be a small software agent executing on the client terminal **12** that monitors the user's online access.

The call manager system **18** monitors the user's session or the presence of the user on the Internet. In one embodiment, the client application **13** can make the user's online presence known to the call manager system **18**. In particular, the call manager system **18** communicates with the client application **13** to determine whether the computer **12** is online. Presence detection can be performed by call manager system **18** polling or pinging the computer terminal **12** via the client application **13**, or by the client application **13** transmitting an "I'm alive" message and subsequent periodic "keep alive" messages to the call manager system **18**.

The schedule for placing the call from a user could be immediate. In this case, if the computer **12** is accessing the Internet **16** over the user's telephone line via a dial-up connection, the user's networked computer **12** is disconnected from the Internet and a call is placed from the networked computer **12** to the call management system **18**, as described in greater detail below. Alternatively, the call schedule can be set for when the user goes offline, when the user next goes back online, the next day, month, year, or at the occurrence of other specified time or event.

Thresholds on call retries and frequency are optionally established between the networked computer client application **13** and call management system **18** to reduce the impact on the availability of the user's phone line. For example, the client may be restricted to no more than one call attempt within a 24-hour period. In addition or alternatively, the networked computer-client application **13** can be restricted from making a call attempt if a user has received an incoming call within a predetermined amount of time. Thus, for example, a call may be placed by a caller to the user while the user's telephone line is being utilized to by the user's computer terminal. The call is then forwarded to the call manager system **18** which transmits a notification to the user via email or the client application **13** regarding the forwarded call. If the user then goes offline within a predetermined amount of time, such as within 5 minutes, it may be assumed that the user is calling the caller back. Therefore, in order to avoid tying up the user's phone line, the call to the pay-per-call number may be scheduled for another time, such as the next time the user goes online.

When the client application **13** receives an instructional message from the call manager system **18** to place a call for billing purposes, the client application **13** uses dialer software and a modem associated with the networked computer **12** to place a call to the telephone number provided by the call manager system **18** via a dial-up or always-on connection, or to place a call to a number pre-provisioned and stored on the computer **12** in conjunction with the client application **13**.

The call is switched at a local exchange switch, such as the OLEN **24**, and connects with the pay-per-call network **26**, where after the amount and transaction request are processed according to a predetermined plan, such as charging for a good or service at a predetermined price by calling a corresponding pay-per-call number. The call origin or source is identified using ANI or a similar service that provides the user's telephone number. The ANI establishes a billing num-

ber from the identified telephone number, and passes this information to the pay-per-call network **28** for billing purposes.

FIG. **3** illustrates an example process **300** of placing a call to a pay-per-call service employing a user's computer. Starting at start state **302**, the process **300** proceeds to state **304**, wherein a user initiates a purchase and indicates that the purchase price is to be billed to the user's phone bill. At state **306** a message is sent to the call manager system, including the user's phone number or other account identifier, and the purchase price amount to be charged to the user's phone bill. At state **308** the call manager instructs the client application executing on the user's computer to call a pay-per-call number selected based at least in part on the purchase price. At state **310** the user's computer calls the selected pay-per-call number. At state **312** the pay-per-call services causes the purchase price amount to be charged to the user via the user's long distance or local phone bill. The process **300** ends at state **314**.

In one embodiment, the client application **13** is autonomous or semi-autonomous. That is, the client application **13** detects or is directly informed by the merchant when the user is making a purchase. The client application **13** uses a look-up table stored on the computer **12** that lists a plurality of pay-per-call numbers and the corresponding charges for calls to those numbers to determine the appropriate pay-per-call number to call for the purchase. The client application **13** then initiates a call via the computer **13** to the appropriate pay-per-call number. The look-up table may periodically be updated by the call manager system **18**.

In some embodiments, optionally including the embodiments described above, the call manager system **18** automatically checks the balance due for an account after the user logs in to the call manager system **18** by accessing the user database. If the call manager system **18** finds a balance due on the account, the call manager system **18** passes a message to the networked computer **12**. The message may notify the user of the outstanding balance, request payment of the outstanding balance or a portion of thereof, or other like actions prior to proceeding with the established session. The call manager system **18** may effect a payment transaction via the previously described billing systems and methods; update the user's account to reflect the payment transaction; and notify the user of the action taken on the account via a message to the networked computer **12**.

In addition, the call manager system **18** optionally determines if a user's phone line is blocked from pay-per-call services. In one embodiment, this is accomplished using the following example procedure. Assuming that the user computer **12** is accessing the Internet using a broadband connection, the call manager system **12** transmits a request to the networked computer client application **13** to place a call in real-time while a user is transacting an order from a web site over the broadband connection. If it is determined that the user's line is blocked, then the user, while still transacting the order on the web, can be informed that another form of payment will be required. This should further improve the billing and collection conversion rates of the service provider or merchants.

The determination of whether the user's line is blocked from pay-per-call services can be performed using several different processes, and the response thereto can vary as well. For example, the call manager system **12** may transmit a request to the networked computer client application **13** to place a call to a pay-per-call number associated with the call manager system **12**. If the call manager system **12** fails to receive the call after one or more attempts, a determination is

made that the user's line is blocked from making such a call. Even if the call is received and the ANI read, the call manager **12** may not answer the call to avoid billing the user. Optionally, the call may only be answered if there is a user balance due. A notation may be used in the user's account information that the user's line is blocked so further attempts will not be made. Instead, if the user in the future requests to make a purchase using a pay-per-call process, the user may automatically be requested to provide payment using an alternate method or instructions on how to unblock their line. In another embodiment, the call manager system **12** may transmit a request to the networked computer client application **13** to place a call to a pay-per-call number, and if an operator answers indicating that the call cannot be completed, a determination is made that the call was answered by a human voice and it is inferred that the user's line is blocked.

FIG. **4** illustrates an example process **400** used to detect whether a user's phone is blocked from calling a pay-per-call service. Beginning at start state **402**, the process proceeds to state **404**. At state **404**, the call manager transmits an instruction to a client application to call a designated pay-per-call number, such as a 900 number, associated with the call manager system. At state **406**, the client application instructs the user's computer or other terminal to call the designated pay-per-call number for the purpose of determining whether the user's line is blocked from placing a pay-per-call number. While the call is to a pay-per-call number, in the example process **400** the user is not charged for the call.

At state **408**, the call manager system monitors incoming calls on the pay-per-call number to determine if the user's computer succeeded in placing the call. Note that the call need not be answered to succeed in placing the call. Success is defined in one embodiment by the user's ANI being received. The call manager can determine from which number a call is placed via the ANI transmitted along with the call. If a call is received from the user computer, the process **400** proceeds to state **410** and then optionally can perform the purchase and call placement process **300** illustrated in FIG. **3**. If instead a call is not received from the user's computer at the designated pay-per-call number, the user's account information stored in the user database is annotated to indicate that the user's phone line is blocked from calling pay-per-call phone numbers. At state **414**, the call manager sends a request to the user's computer asking the user to provide an alternate form of payment, such as a credit card charge or a check. The process **400** ends at state **416**.

If the blocking determination is made in real-time, the user can be offered an alternative payment method while transacting the order. In one embodiment, the blocking determination could be made in advance, and the user could be offered other payment options automatically when the user attempts to make a transaction. Further, if an advance blocking determination is made, the user could be offered only those goods or services that do not require use of a pay-per-call type service. Additionally, the user is optionally offered a description on how to unblock pay-per-call type services on their phone line. The advance determination can be made by, for example, accessing the user database to determine if a pay-per-call blocking notation or indication has been provided.

Thus, as described above, embodiments of the present invention provide consumers with a reliable, secure, and convenient method of utilizing a telecommunications network to pay for goods or services using pay-per-call services.

Although the description above contains many specifics, these should not be construed as limiting the scope of the invention but as merely providing illustrations of some of the presently preferred embodiments of this invention. There-

fore, it will be appreciated that the scope of the present invention fully encompasses other embodiments that may become obvious to those skilled in the art.

What is claimed is:

1. A method of placing a call comprising: receiving information over a data network related to a user's purchase request; and at least partly in response to receiving the purchase request-related information, causing, at least in part, a call to be placed from a mobile device associated with the user to a pay-per-call type telephone service via a communications network, wherein the pay-per-call type telephone service is not the subject of the purchase request and a voice communication from the user is not transmitted via the call, wherein the call provides billing information associated with the user to the pay-per-call type telephone service and wherein, if the call is answered, the user is billed for a purchase price associated with the purchase request at least partly in response to the call placed to the pay-per-call type telephone service.
2. The method as defined in claim 1, wherein the mobile device includes a software application which receives the purchase request from the user.
3. The method as defined in claim 1, wherein the billing information includes at least a phone number associated with the user's mobile device.
4. The method as defined in claim 1, wherein a remote processing system determines whether or not the call is to be answered.
5. The method as defined in claim 1, wherein if the call is not answered by a call processing system the user is not billed as a result of the call.
6. The method as defined in claim 1, wherein a remote processing system determines that the call is not to be answered if a user balance is not due.
7. The method as defined in claim 1, wherein a remote processing system determines that the call is to be answered if a user balance is due.
8. The method as defined in claim 1, wherein a remote processing system configured to answer the call has access to account registration records for the user.

9. The method as defined in claim 1, wherein the user is billed for the purchase price based on a flat rate charge as a result of the call.

10. The method as defined in claim 1, wherein the call to the pay-per-call type telephone service is automatically placed by the user's mobile device in response to a command received over the network from a remote processing system.

11. The method as defined in claim 1, wherein the mobile device is a personal digital assistant.

12. The method as defined in claim 1, wherein the mobile device is a cellular phone.

13. A method of processing a communication received over a network, comprising:

receiving information over a network related to a user's purchase request;

at least partly in response to the purchase request information, causing at least in part an electronic communication to be originated from a mobile device associated with the user over at least one network to a first destination in order to cause at least in part a billing event to occur for the purchase request, wherein the communication from the mobile device is not the subject of the purchase request and is not part of a voice call from the user; and

wherein, via the communication, a remote processing system associated with the destination obtains billing information associated with the user, including the user's mobile device phone address, and the user is billed for a purchase price associated with the purchase request at least partly in response to the communication; and causing at least in part a charge for the purchase to be billed via a phone bill.

14. The method as defined in claim 13, wherein the network includes a data network.

15. The method as defined in claim 13, wherein the communication is automatically initiated.

16. The method as defined in claim 13, wherein the mobile device is a cellular phone.

17. The method as defined in claim 13, wherein the mobile device includes a software application which receives the purchase request from the user.

\* \* \* \* \*