(54) Title: SPECIALIZED ACCESS TELEPHONY FULFILLMENT SERVICE SYSTEM

(57) Abstract: A information fulfillment system and method (Fig. 1) for providing information to a caller having wireless service (103), POTS service and/or internet access (110). Upon receipt of sensory prompting and manual or automatic input of access codes to a communications device (101 & 102), the caller’s identity and the input access code are verified. Thereafter, the call is connected to the system messaging or fulfillment center for automatic or live-operator delivery of the requested information (105-107). Automatic verification, connection, and billing modification processes are provided for implementation of the system and method (800-810).
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.
SPECIALIZED ACCESS TELEPHONY
FULFILLMENT SERVICE SYSTEM

FIELD OF THE INVENTION

The invention relates to a system and method for a caller to obtain various levels of fulfillment, research, two way communication, and other services utilizing Plain Old Telephone System (POTS) and/or internet-based communication products. The system includes one or a plurality of users connected by way of such services to a central or regional messaging and fulfillment center. A method for dynamic modification of traditional billing methods to divert billing to third parties, and change the billing party for telephony services during the pendency of the call is additionally implemented.

BACKGROUND OF THE INVENTION

While radio and television have provided a medium for delivery of advertising messages for decades, they have limitations for advertisers based upon the cost of on-air time and programming schedules.

From a marketing perspective, a system for the delivery of advertising messages is ideally one in which the prospective customer initiates the contact, thereby eliminating the time and cost expenditures related to unsolicited advertising delivery services of the past such as cold-calling or internet banner ads. In addition, the advertising contact should be free to the prospective customer and the system should be equipped to modify existing telephony billing procedures for telephone based calls in order to shift the cost of the advertiser.

U.S. Pat. No. 5,131,020 of Liebesny, et al. discloses a method for providing traffic updates to cellular telephone customers within a regional calling area. User input of a code representing the traffic zone of interest to the user automatically connects to either a live operator or a taped message including the requested traffic information. While the Liebesny method does deliver user-requested
information via cellular telephony, its delivery is local and the messages fixed in scope.

U.S. Pat. No. 5,214,793 of Conway, et al. provides a system for automatically delivering advertising, traffic status, directions, or other information to motorists having microwave transmitter/receiver systems at their respective locations. The requirement that the Conway user have the microwave equipment clearly limits the prospective audience and transmission delivery capabilities of such a system.

U.S. Pat. No. 5,216,703 of Roy provides a cellular switching system whereby indicia dialed by the user after a cellular star (*) number is unique to a specific third party advertiser (TPA) and is used to direct the user's call through a special trunk in the switching system in order to deliver the TPA's message to the user. The Roy system utilizes cellular technology to enter into a trunked system, but is clearly limited in its ability to provide switching through an extensive network of advertisers and providers.

U.S. Patents Nos. 5,918,213 and 5,661,787 disclose the provision of certain fulfillment information based upon a telephone call placed along the PSTN, but do not utilize a specialized access code and are not broadly addressed to the provision of various types of fulfillment information from a broad range of advertisers and providers.

What is an objective, therefore, is a system and method for delivery of targeted messages to prospective customers which is not subject to the time constraints of traditional advertising media.

Still another objective is to provide a network for message fulfillment which is not limited geographically or limited by the technological capabilities of the advertisers.
Yet another objective is to provide hierarchical billing procedures for appropriately assigning call placement charges to the responsible party.

A further object is to provide users with fulfilment information via multiple media channels such as wireless telephony, land-line telephony and the internet.

Yet a further object is to provide users with fulfillment information for multiple advertisers via multiple media channels such as wireless telephony, land-line telephony and the internet.

Yet another object of the invention is to provide information services in a manner which does not fall under Federal telecommunication tariff regulations.

Various other objects, advantages and features of the present invention will become readily apparent from the ensuing detailed description and the novel features will be particularly pointed out in the appended claims.

SUMMARY OF THE INVENTION

The technology of the invention will be practiced in at least three general modes. First, a prospect watching television will observe the advertiser's message, which will include a call-to-action, for example "CALL #333" or selected other specialized access code, using any phone. Second, a prospect listening to a radio broadcast will be prompted to dial #333 (for example) by trailers to commercials. Third, prospects will be directed to the 333.COM World Wide Web Site, for example. Other uses of the invention may involve prompts located in direct mail or print media, etc.

Following the general direction to dial the access code or access the web site, each individual commercial spot will provide one or more terms identifying the particular advertiser.
The prospect will then utilize their phone or internet connection to seek out additional information on the advertized product or service.

For telephony-based users, once a prospect calls #333 (or other designated access code), they will hear a short message welcoming them to the system and prompting them to either dial or speak a term identifying the advertiser, for example the name of the advertiser or a product name. After dialing or speaking the term, the customer will enter either an automated messaging system or be greeted by a live operator. Due to the inherent limitations of television and radio advertising in terms of communicating a detailed message of product and service benefits, the additional level of transmitted information will have a high perceived value to the advertiser, the consumer and the purveyor of advertising media.

For internet users, once a prospect reaches the 333.COM Web Site, the prospect is prompted to either enter a keyword or locate a keyword on a pull down menu. To assist in identifying the location of the user, the user is first prompted to enter his or her zip code or other identifying characteristic (such as a phone number). From this point, a list of the one or more advertisers associated with the entered or selected term is provided to the user. The user selects the desired advertiser, and the user is provided with fulfillment information in one of a plurality of ways, e.g., direct link to the advertiser’s website, the completion of a reader service form by which fulfillment is provided to the prospect by later contact, or the direct provision of actual fulfillment information.

Based upon the particular service or services contracted by the advertiser, prospects can be provided with a menu of additional customer services including: the mailing of product/service information to their home or business; a listing of local retailers and their addresses or telephone numbers (with directions under certain circumstances); direct product sales; couponing; sampling; sweepstakes entry; polling; optional transfer to a retailer; optional transfer to the advertiser’s customer service number; optional transfer to the advertiser’s mail order desk; or,
an opportunity to participate in a brief survey (for which the prospect may receive some nominal compensation or award).

**BRIEF DESCRIPTION OF THE DRAWINGS**

The above and related objects, features and advantages of the present invention will be more fully understood by reference to the following detailed description of the presently preferred, albeit illustrative, embodiments of the present invention when taken in conjunction with the accompanying drawing wherein:

FIG. 1 provides an overview block diagram of the inventive system.
FIG. 2 details call routing in accordance with the present invention.
FIG. 3 provides a block diagram detailing the elements of the invention related to call initiation.
FIG. 4 is a block diagram showing changes to the existing telephony network to implement the present invention.
FIG. 5 illustrates a flow diagram of the system illustrating how digits are processed using ISDN technology.
FIG. 6 provides a flow diagram of the system illustrating how digits are processed using DNIS technology.
FIG. 7 provides a block diagram of the interconnected components required at the target or processing location of the call.
FIG. 8 is a flow chart showing advanced billing features.
FIG. 9 is a block diagram of one embodiment of the present invention.

**DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

In detailing the subject invention, several industry-recognized definitions and newly-coined terms will be used throughout the description. In order to facilitate an understanding of the invention, the following glossary of terms is provided:

-5-
Access Code: Specialized dialing code to access the system such as \\#333\\.

Advertiser Identifier: Secondary code used to select target advertiser. Also referred to as "advertiser extension."

ANI: Automatic Number Identification. Commonly referred to as a ten digit telephone number.

CO: Central Office

DNIS: Dialed Number Identification Service

ISDN: Integrated Services Digital Network

IVR: Interactive Voice Response

LEC: Local Exchange Carrier

N-AMPS: Narrow band AMPS

NPA NXX: The first six digits of the ANI representing the Number Plan Area (Area Code) and Local Exchange.

POTS: Plain Old Telephone System

PSTN: Public Switch Telephone Network

SDN: Software Defined Network

Target Location: Final destination of the call for fulfillment.
FIG. 1 provides a process overview of the present invention. There are essentially four distinct basic functions which comprise the process flow, the details of which are discussed below. These elements are (1) the call initiation at 103, the detailed process flow for which is provided in FIG. 3; (2) translation or other elements of the public wireless network (PWN) at 104, as further detailed in FIG. 4; (3) transfer of the call over the PSTN at 105, as further detailed in FIGS. 5 and 6; and (4) control over fulfillment and feedback to the user, as detailed in FIG. 7.

The call initiation function is generally outlined by steps 101-103, 109 and 110. At step 101, the prospect receives the sensory input which prompts use of the system, via one of a plurality of sources, e.g., television, radio, the print media etc. Upon manual input to a telephone (or computer having an internet connection), at 102, the prospect calls in (or accesses the internet) to obtain the information suggested by the sensory input. Box 103 refers to the initiation of the wireless call from the system perspective, as opposed to the caller input and transmission from the caller's telephone. Step 109 represents the initiation of a POTS call and step 110 is the access of the associated web site. As an alternative to the caller manually placing the telephone call, the call may be initiated by automatic processing, as will be discussed below with reference to FIG. 3.

Step 103 initiation of the wireless call by the system results from either a third party remote triggered signal or a local independent transmitting signal and includes the ANI for subsequent access and billing verification. Subsequent to system initiation of the call, the wireless call is transmitted along the PSTN at 104, for caller identification, billing verification and/or modification, and routing as is further detailed below. Thereafter, service is provided along the PSTN at step 105 (a POTS call progresses directly to step 105) and the call is ultimately provided for routing to the messaging center at step 106 and thence handled at the gateway to the target fulfillment center, at step 107, allowing the delivery of the fulfillment information to the prospect at step 108.
In the case of an internet contact, the prospect links to the web site at step 110, and is prompted to enter information about the type of information desired at step 111. The prospect may first be prompted at step 111 to provide location information, such as a zip code, telephone number, address, etc., to allow the system to identify the particular advertisers for the particular region in which the prospect lives. The prompt provided to the user regarding the type of information desired may take one of a number of forms, including a space to enter keywords, a pull-down menu, etc. The system processes the prospect user input at step 112, and fulfillment information is routed to the prospect at step 113. The fulfillment information may be in various formats, including, for example, a direct link to a particular advertiser's web site, followup contact by way of a reader service form, or the actual provision of information.

FIG. 2 provides a more detailed description of the path of a call through the inventive system. From the wireless telephone, 200 of the block diagram, the call is sent with the caller input access code, which is an abbreviated dialing code to access the system, such as #333, to remote switch 201.

Central to the operation of the inventive system is the functioning of the central office switch 202. This switch must recognize the caller seeking to utilize the system and must recognize the access code and compare it to entries in a database of approved codes. Software or firmware at the switch is utilized to modify established billing procedures and to create a new billing record for the third party provider of the service under a preset billing arrangement. Alternatively, if the system determines that the caller's service provider has not arranged to allow treatment of the call as free to the caller, the system queries the caller if the caller will agree to be billed for all charges. Absent caller acceptance of billing responsibility, access to the system is blocked.

Assuming favorable determinations with respect to verification of the input access code, of subscriber identity, and of caller billing, switch 202 converts the
access code to a land line 800-number with an origination point outside the caller's state (e.g., Indiana for calls from Illinois), through the PSTN's central office illustrated as block 203. Typically, the preassigned POTS numbers will be traditional 800 service numbers. Such service is exemplified by AT&T's MEGACOM 800 Service with a Customer Specific Term Plan II (CSTP II). Typically, such service will also utilize on-line call detail data software to collect information about the system calls such as connect time, the 800 number used, call disposition, date and time of call, call duration, and the ANI of the caller. Such service is generally described as a high capacity digital, direct access, virtual banded, inbound calling service, and requires a dedicated connection between the serving central office and the target location, as is known to one having familiarity in the art. Depending upon the access code, and the nature of the fulfillment of a call bearing that access code, the call may be routed along one of several call completion paths at the PSTN, as further detailed in FIG. 3.

In the case of a POTS call, as opposed to a wireless call, the prospect dials the access code, e.g., #333, (as shown at 210), and the LEC translates the access code to the desired number, e.g., a toll free number used to access the message center. If necessary, the LEC may perform call forwarding at 212 to allow alternative billing, in the event that a toll free number is not being used but reverse billing is desired (i.e., so that the advertiser pays for the call, not the prospect, even when the translation is not to a toll free number). From this point, the call is directed to the PSTN central office 203.

Call completion involves selecting the long distance carrier of choice and routing the call to this carrier's Point of Presence at 204 via the selected Routing Telephone Number. This procedure is implemented using either a conventional in-band Dual Tone Multi-Frequency (DTMF) system or by packetizing the digits and processing them via a Signaling Transfer Point (STP) 213 into the Signaling System 7 common channel signaling network 214. If the Point of Presence is local to the messaging center, the connection is made, via Long Distance Trunk 205
using the dedicated 800-number, to the local Point of Presence and thence to the target location messaging center 209 using T1.5 or T3 access lines 208.

When the carrier Point of Presence is not local to the messaging center, the call is routed via the network to a Signal Transfer Point 213 (also referred to as a Signal Control Point, SCP) or other network node that contains databases that support the company's services. Thus, from the Foreign Data Base at 215, access is made to the Central Office 207 and ultimately to the Messaging Center 209.

By means of an Integrated Voice Response (IVR), the subscriber is thus able to obtain information and/or fulfillment services. Subsequent to initial call dialing the subscriber inputs information on the geographic location of the terminal involved in the call, or alternatively inputs location information such as area code or zip code.

FIG. 3 describes the initiation of the call, shown in FIG. 1 as step 103, using manual or automated means. Note the following means for call initiation:

(a) Sensory input 308 and POTS phone dialing 340: as shown in FIG. 3, a prospect may obtain sensory input from a variety of sources, including service experience 310, the internet 311 and television 312. Upon receipt of the sensory input, the prospect manually dials the POTS phone using the access code.

(b) Sensory input 309 and manual initiation 1301: as shown in FIG. 3, the subscriber receives a sensory input from any of a variety of physical and electronic promotional and/or advertising media, 313 through 317, including, but not limited to, pagers, television, broadcast radio, billboards, world wide web, printed media, or other means. Upon receipt of the sensory input at 309, the caller manually conducts the telephone call at one of the input modules 304 through 307.
(c) Automated signal initiation is triggered through the mobile wireless antenna 342 or vehicle antenna 341, upon receipt or input from any of the components 318 through 321 which can communicate with the antennas. Such signal to be originally generated by AM or FM radio transmitters, satellite feed, cable television or other means triggers the automated signal at 303.

(d) Third party remote triggered signal at 302 and subsequent initiation parallels the automated signal at 303 since such signaling is automatically conducted by the mobile wireless antenna 342 or the vehicle antenna 341. The input, though, may be transmitted through further means, 322 through 328, including cellular or other wireless telephony equipment.

A sensory input that contains any information that encourages the subscriber to utilize the invention may prompt the customer to initiate a call using the keypad of a telephone to dial or speak a set of digits commencing with *, or some other call prefix such as #, utilizing a special code. These digits, activate the communications system and connect the subscriber by means of a formatted message over a T1 or other kind of link to the line interface at the CO where the call is demodulated and connected to the central processor at the mobile switch. Using the same input media, an advertiser can access the system to update or modify fulfillment data from a remote location using the appropriate (*) or (#) identifier.

FIG. 4 further describes the functions of the CO switch in accordance with the present invention. The CO comprises the computerized equipment that coordinates and controls the routing and completion of calls in a PTSN system. The CO includes a Central Processor (not shown) for identifying, accepting, and taking action upon receipt of the dialed digits as part of a call having a special prefix. The central processor functions are detailed at FIG. 4.
At 400, the CO receives the abbreviated access code and verifies both the access code and the caller identity at 410. An object of the present invention is the use of relatively few digits as advertiser identifiers to reduce user induced errors in the system and generally increase user friendliness. The CO switch first determines whether the received access code is one which the CO recognizes as valid. Assuming validity of the access code, the CO switch next verifies the caller's identity and approved access to the system. One or more of the following identifiers can be verified at the CO: ANI of the telephone; Billing Number; Subscriber name; Subscriber billing address; Subscriber home telephone number; Subscriber personal telephone number; Subscriber priority indication; Priority Access & Channel Assignment (PACA) level (A, B or C); Preferred language; and, Home wireless service provider information. As will be apparent to one having skill in the art, some of the above-listed information may be automatically appended to the user-input access code by the telephone, depending upon the specific preprogramming thereof.

After caller identification, the user-input access code digits are provided for analysis and translation at 420 by the central processor at the switch where software operates on them and compares them with data received from a number of databases, 460, 470 and 480. These databases provide data on both calling and called parties and preferred routing through the network and are integral to the call processing procedure, examples of these databases being user files, number tables, access codes and routing tables. The various data are analyzed and, when the dialed digits and other transmitted identifiers are approved, the processor creates a set of translated digits that are returned to the call processing module for additional actions to be taken, such as billing procedures at 430, and call routing 440.

At 430, software within the central processor at the CO insures that the subscriber making the call is not billed for local or long distance call charges, or
local and remote charges. Billing modification, with the object of allowing the CO to accept calls it otherwise would not, is further detailed in FIG. 8.

Finally, upon successful completion of steps 400 through 440, at which time the access code has been recognized, the subscriber identity has been recorded, the access code is converted to a landline number at 440 and the call routing software at the CO instructs the central processor to proceed to the next stage of telephone network call completion procedures by routing the call along the PSTN at 450.

If the above process is interrupted at any point after receipt of the caller ANI, further special software may instruct the switch to send a recorded message that prompts the prospect to redial the complete number sequence. On receipt of the digits, the call validation and call processing procedures are restarted.

FIG. 5 provides a detailed description of the call processing in accordance with the present invention when ISDN technology is available. The long distance carrier's data base functions are central to the implementation of the present invention which relies on ISDN technology. ISDN provides a common architecture for the development and deployment of digitally integrated communications services, using out-of-band signaling to permit the user's equipment and the PSTN to exchange control and signaling information over a separate channel from that which carries voice or other user information. ISDN lines are divided into bearer ("B") channels and a supervisory control or data ("D") channel. The D channel is used for out-of-band signaling and the B channels carry digitally encoded voice or other traffic. The D channel also carries information about caller identification which can be used in the present invention to determine geographic location.

The invention utilizes ISDN technology to acquire the ANI of the LEC, or caller and combine the geographic locator element of this ANI with the advertiser identifier to create an unique advertiser code and access fulfillment commands. At
500, the call is received at the PSTN, the identity of the ANI is checked at 510, and the call is routed to the target location at 520. The ISDN information is read on the D channel at 530, the D channel protocol conducted at 540, and the ANI verification conducted at 550 and 560. Once the ANI has been confirmed, the call is answered on the B channel at 570, with audible prompting to the caller being provided at 580. The ANI and the advertiser code (from the caller) will be linked at 590 and the database accessed at 595 in order to fulfill the call (i.e., retrieve and deliver the advertiser's message).

FIG. 6 is a process flow utilized by the present invention when implemented with DNIS technology. DNIS technology allows the PSTN to transport information on the number dialed or in this application the POTS "800" number translated by a given wireless provider. Such information can then be read by the target location to determine via a preassigned look-up table the approximate geographic location of the caller. Variants of the present invention which rely only on DNIS technology may utilize T1 access with in-band signaling only.

Upon translation of the access code to the 800 POTS number, at 600, the call is routed from the LEC at 610. Attachment of the DNIS data using the long distance carrier database is conducted at 620 and the call routed to the target location at 630. At the target location, the call is answered at 640, the DNIS data received at 650 and the caller prompted to provide the advertiser's code at 660. Linking of the DNIS and the advertiser's code is conducted at 670 followed by accessing of the fulfillment information. The inventive process thus utilizes DNIS technology to acquire the ANI of the transcribed POTS "800" number and combine the geographic locator element of this ANI with the advertiser identifier to create an unique advertiser code at 336 and to access fulfillment commands at 680.

FIG. 7 further describes the components of the invention related to the target, or fulfillment, location. The target or fulfillment location may include a
voice activated switch 700 to welcome the user and prompt verbal entry of a required alphanumerical code. An alternative keypad switch 710 may be available for receipt of keyed input of the required code. When the caller provides an audible identifier for interpretation by speech recognition software at the system's messaging center, inability to recognize an identifier, whether incorrect or unrecognizable for other reasons, will result in a prompt for the caller to repeat the audible identifier. If still not recognized as correct, the system will prompt the caller to enter the identifier using the phone keypad. In some instances, a live operator may answer the call and deliver the request for an identifier or trigger a recorded message requesting the identifier. The operator would then retrieve the advertiser specific files manually or by entry to one of a plurality of networked PC's, 720 through 740, after hearing the user speak the alphanumerical code.

Whether automatically or manually queued, the front end PC's select the relevant advertiser file, deliver the advertiser message and, if necessary, route the call for further processing (e.g., demographics information gathering; sweepstakes entry; caller ordering with attendant information gathering including credit card or other personal account billing verification based upon input provided by the user either by magnetic card reading or secured transmission of alphanumerical information entered by the caller at the time of ordering or preprogrammed into the telephone, which may be conducted directly by an entity at the messaging center or may require transfer of the call to the advertiser's order desk; survey participation, appointment scheduling; etc). As appropriate, one or more local servers 4760, or one or more remote servers 790, receives call fulfillment information, as does the system provider server 770 for tracking of system use, advertiser and caller demographics and billing data, etc.

The system's target or fulfillment center also includes a customized administrative database 750 which notes the time of calls, duration of calls, location of caller, number of calls for each identifier, monitors volume and other physical parameters of a call, and administers billing of calls. Other database
information which may be stored and/or updated includes a caller's social security number, address, credit or debit card number, sizing and credit history. In those variants of the present invention which utilize ISDN technology, the target location must use an ISDN compatible switch with T1 or T3 cards, such as the Varilink CSU Model 551 or Northern Telecom's SL1 Meridian Model Option 81. ISDN processing also requires Extended Super Frame (ESF) Binary Eight Zero Suppression (B8ZS) signaling.

FIG. 8 describes the advanced billing process flow for one aspect of the present invention. Although one of the objectives of the system is to control call length to be within predefined parameters established by the advertiser and the third party service provider, call length can be extended if the caller so desires and is willing to incur the additional expense of the call. In that way, extended communication with the advertiser, their dealer or representative can be provided without requiring the caller to initiate a second call.

FIG. 8 describes the process whereby the billing of the telephony charges revert back to the caller from a given point during the pendency of the call. If, at 800, the caller desires to transfer the call, or to extend the duration of the call beyond the time preset by the third party billing arrangement and monitored by the system, the caller is notified, at 810, of the caller's need to accept billing responsibility for the remainder of the call. At decision box 820, the system ascertains whether the caller is willing to accept the billing responsibility. If not, the call is terminated at 830. If, however, the caller will accept billing, the system notifies the LE to modify the billing process at 840. The wireless carrier then verifies the caller's credit at 850 and creates a new billing records at 860. Thereafter, the call is extended, or transferred as required, at 870.

Such billing reconfiguration requires utilization of the intelligent network such as ISDN in order to signal the wireless provider of the need to modify is
billing process. If transfer is required, the call is transferred to a second target location using traditional POTS means.

The communications system as taught provides that the caller not be charged for any connection or service time but rather the targeted receiver is charged for the call using a specific dialing prefix. In the alternative, the targeted receiver can be charged for the call based upon a specific and dedicated frequency to be used for all such calls. Yet another arrangement provides the targeted receiver be charged for the call based upon a specific and dedicated numbering code to be used for all such calls.

Referring now to FIG. 9, in one embodiment of the present invention, prospects dialing the access code, e.g., #333, will pass through the LEC in their own particular region, where the access code will be converted to a POTS number. For example, a prospect whose calls are normally routed through LEC 1 (900) have his or her #333 call pass through that LEC. Likewise, a prospect whose calls are normally routed through LEC 2 (905) have his or her #333 call pass through that LEC and a prospect whose calls are normally routed through LEC Z (910) have his or her #333 call pass through that LEC. All callers will reach an Integrated Voice Response system 915, which may access a database 920 of available operators by state. The IVR system 915 directs each prospect's call to an appropriate call center which is, preferably, in a separate state from that in which the prospect in making the call. In this manner, certain Federal tariffs applied to intrastate telephone calls will not apply to the call. Each call center 1 (925), 2 (930) to I (935) is capable of responding to the prospect's request for fulfillment information, based upon an advertiser's name or keyword. In addition, the location of the prospect, as identified by the ANI, is used, in an embodiment, to limit the pool of advertisers available to a prospect to only those who have contracted to advertise to a particular region. When a prospect's call is sent to a call center, e.g., call center 1 (925), fulfillment information may be directly provided, a later response by an advertiser may be arranged, or the call may be
routed directly to the advertiser location, e.g., advertiser location 1 (940), advertiser location 2 (945) or advertiser location N (950). Although not specifically shown in FIG. 9, each call center 925-935 is providing information to callers from all regions and is capable of routing calls to any contracting advertiser location (940-955).

Several advanced system features may be incorporated to enhance the capabilities of the inventive system, including an encryption system to secure financial data transmission; automatic downloading of data to the caller's phone or via the phone receiver to various computer systems; concurrent transmission of voice and data; and integration of automatic directories of advertiser's codes.

Additional advantages and modifications will readily occur to those skilled in the art. Therefore, the invention in its broader aspects is not limited to the specific details provided herein. Accordingly, departure may be made from such details without departing from the spirit and scope of the appended claims.
We claim:

1. A method for providing requested information from an informational fulfillment center to a prospect, comprising the steps of:
   - prompting the prospect through advertising media to access the informational fulfillment center by providing a specialized access code to said prospect;
   - initiating a call to the informational fulfillment center by dialing said specialized access code on a telephone;
   - routing said call through a public switch telephone network by translating said specialized access code to a public switch telephone network number to direct said call to said informational fulfillment center; and
   - delivering said requested information to said caller from said informational fulfillment center through said telephone.

2. The method of Claim 1, wherein said step of routing said call also reverses the billing on said call such that said prospect is not charged for said call.

3. The method of Claim 1, wherein said step of routing said call translates said specialized access code to a public switch telephone network number located in a region remote from that of said prospect such that federal tariff regulations do not apply to said call.

4. A system for providing requested information from an informational fulfillment center to a prospect provided with a specialized access code through a wireless telephone and through a POTS telephone, comprising:
   - means for switching a call made from a wireless telephone initiated by dialing said specialized access code thereon over a public wireless telecommunications network to a public switch telephone network by translating said specialized access code to a public switch telephone network number to direct said call to said informational fulfillment center;
means for routing a call from a POTS telephone initiated by dialing said specialized access code thereon through a public switch telephone network by translating said specialized access code to a public switch telephone network number to direct said call to said informational fulfillment center; and

means for delivering said requested information to said caller from said informational fulfillment center through either said wireless telephone or said POTS telephone.

5. The system of Claim 4, wherein said prospect is not charged for said call.

6. The system of Claim 4, further comprising:

means for prompting said prospect through advertising media to access the informational fulfillment center by providing a specialized access code to said prospect which can be dialed on a wireless telephone and on a POTS telephone.

7. A system for providing requested information from an informational fulfillment center to a prospect provided with a specialized access code through a wireless telephone, a POTS telephone and an internet link, comprising:

means for accessing said informational fulfillment center based upon said specialized access code;

means for switching a call made from a wireless telephone initiated by dialing said specialized access code thereon over a public wireless telecommunications network to a public switch telephone network by translating said specialized access code to a public switch telephone network number to direct said call to said informational fulfillment center;

means for routing a call from a POTS telephone initiated by dialing said specialized access code thereon through a public switch telephone network by translating said specialized access code to a public switch telephone network number to direct said call to said informational fulfillment center; and
means for delivering said requested information to said caller from said informational fulfillment center through either said wireless telephone, said POTS telephone, or said internet link.

8. The system of Claim 7, wherein said prospect is not charged for said call or said access.

9. The system of Claim 7, further comprising:
   means for prompting said prospect through advertising media to access the informational fulfillment center by providing a specialized access code to said prospect which can be dialed on a wireless telephone, dialed on a POTS telephone or used to access an internet link.

10. A method for providing requested information from an informational fulfillment center to a prospect, wherein said requested information relates to one of a plurality of advertisers, comprising the steps of:
    prompting the prospect through advertising media to access the informational fulfillment center by providing a specialized access code to said prospect;
    initiating a call to the informational fulfillment center by dialing said specialized access code on a telephone;
    routing said call through a public switch telephone network by translating said specialized access code to a public switch telephone network number to direct said call to said informational fulfillment center;
    determining to which of said plurality of advertisers said requested information is associated; and
    delivering said requested information to said caller from said informational fulfillment center through said telephone.

11. The method of Claim 9, wherein said step of routing said call also reverses the billing on said call such that said prospect is not charged for said call.
12. The method of Claim 9, wherein said step of routing said call translates said specialized access code to a public switch telephone network number located in a region remote from that of said prospect such that federal tariff regulations do not apply to said call.
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101  SENSORY INPUT

102  TRANSMISSION INPUT

103  INITIATION OF WIRELESS CALL

104  TRANSMISSION ALONG PUBLIC WIRELESS NETWORK

106  ROUTING TO MESSAGING CENTER

107  PROCESSING AT MESSAGING CENTER

108  DELIVERY OF FULFILLMENT INFORMATION

110  ACCESS INTERNET WEB SITE

111  USER INPUT

112  INPUT ANALYSIS

113  FULFILLMENT ROUTED TO USER

FIG. 1
400  RECEIPT OF DIALED ABBREVIATED ACCESS CODE AT MTSO OR LEC

410  RECOGNITION OF CALLER IDENTITY

420  ANALYSIS AND TRANSLATION PROCESS

430  ACCEPTANCE OF CALL & INITIATION OF BILLING MODIFICATIONS

440  CONVERSION OF ACCESS CODE TO ROUTING LAND LINE NUMBER

450  ROUTING OF CALL ALONG PSTN

FIG. 4
500 POINT OF ORIGINATION TO PTSN

510 IDENTIFY ANI OF ORIGINATION POINT

520 ROUTE CALL TO TARGET LOCATION USING ISDN COMPATIBLE T1 OR T3

530 READ ISDN INFO ON D CHANNEL PRIOR TO RECEIPT OF VOICE (B CHANNEL)

540 EXECUTE D CHANNEL ACCEPTANCE PROTOCOL

550 ACQUIRE ANI FROM D CHANNEL

560 EXECUTE D-BASE LOOK UP TO CONFIRM ANI

570 ANSWER CALL ON B CHANNEL

580 VOICE PROVIDED ADVERTISER CODE & INPUT

590 AUTOMATED LINK OF ANI & ADV CODE

595 DATABASE LOOK-UP OF ANI & ADV CODE TO ACCESS FULFILLMENT COMMANDS

FIG. 5
FIG. 6

600  TRANSLATION OF ABBREVIATED ACCESS CODE TO 800 POTS #

610  ROUTE CALL TO LEC

620  ATTACHMENT OF DNIS DATA USING LONG DISTANCE CARRIER D-BASE

630  ROUTE CALL TO TARGET LOCATION USING IN-BAND T1 OR T3

640  ANSWER CALL

650  ACQUIRE DNIS DATA

660  VOICE PROVIDED ADV CODE & INPUT

670  AUTOMATED LINK OF DNIS AND ADV CODE

680  D-BASE LOOK-UP OF DNIS AND ADV CODE TO ACCESS FULFILLMENT COMMANDS
FIG. 7
800  CALLER DESIRES TO TRANSFER CALL OR EXTEND LENGTH BEYOND THIRD PARTY BILLING PARAMETERS

810  CALLER NOTIFIED OF PENDING BILLING OBLIGATION

820  CALLER ACCEPTS BILLING

   YES

830  CALL TERMINATED

840  NOTIFIED BY INTELLIGENT NETWORK TO MODIFY BILLING PROCESS

850  CARRIER VERIFIES CREDIT OF CALLER

860  CARRIER CREATES NEW BILLING RECORD

870  TRANSFER OR EXTENSION OF CALL

FIG. 8
**INTERNATIONAL SEARCH REPORT**

**International application No.**  
PCT/US00/20440

### A. CLASSIFICATION OF SUBJECT MATTER

<table>
<thead>
<tr>
<th>IPC(7)</th>
<th>H04M 11/00</th>
<th>US Cl.</th>
<th>455/414</th>
</tr>
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</table>

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)

| U.S. | 455/414, 4.1, 4.2, 2; 348/17, 6, 7 |

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

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

- EAST

### C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
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<tbody>
<tr>
<td>X</td>
<td>US 5,752,186 A (MALACKOWSKI et al.) 12 May 1998, see entire patent.</td>
<td>1-12</td>
</tr>
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<td>X</td>
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<td>1-12</td>
</tr>
<tr>
<td>A</td>
<td>US 5,636,346 A (SAXE) 03 June 1997, see entire patent.</td>
<td>1-12</td>
</tr>
</tbody>
</table>

### Further documents are listed in the continuation of Box C.

- See patent family annex.

**Date of the actual completion of the international search**  
15 SEPTEMBER 2000

**Date of mailing of the international search report**  
05 DEC 2000

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Form PCT/ISA/210 (second sheet) (July 1998)