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(54) **ENHANCED SERVICES CALL COMPLETION**

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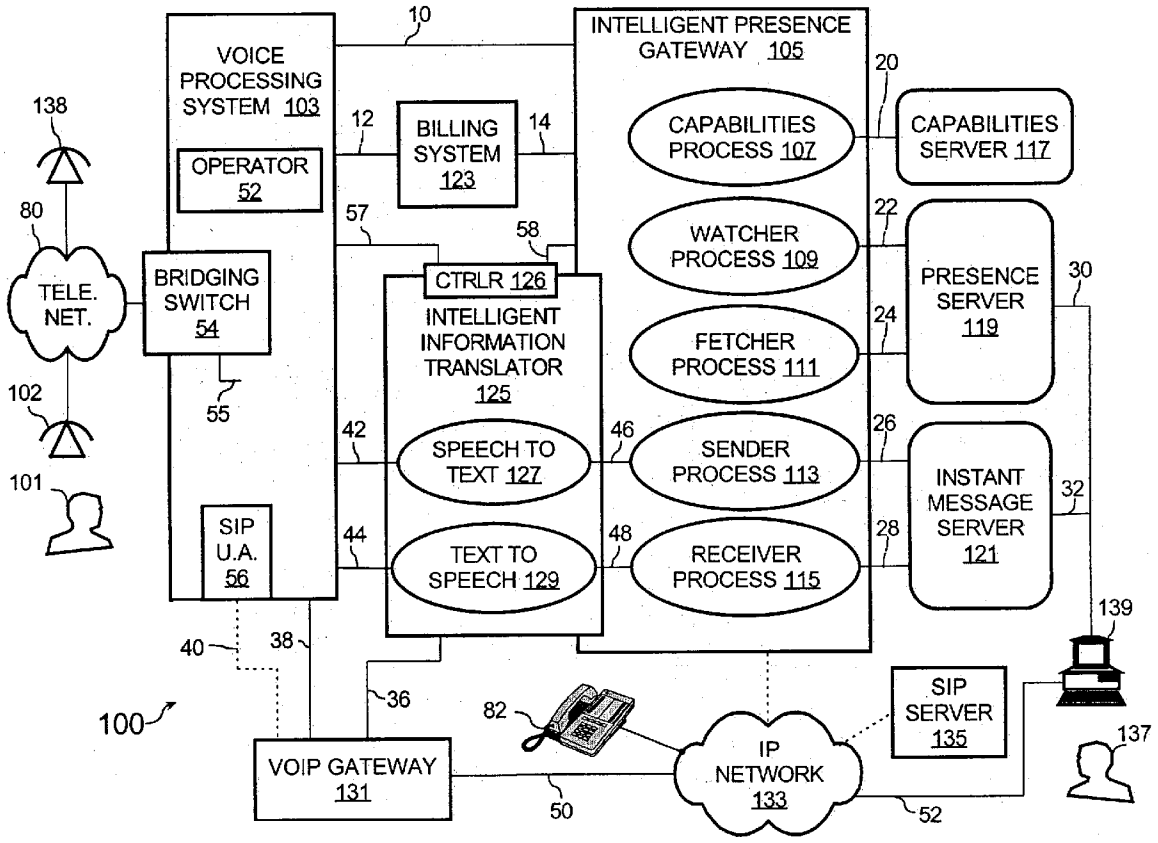
(52) **U.S. Cl.** **379/114.01**

(57) **ABSTRACT**

Methods are disclosed for achieving completion of a telephone call by way of an instant communications client.



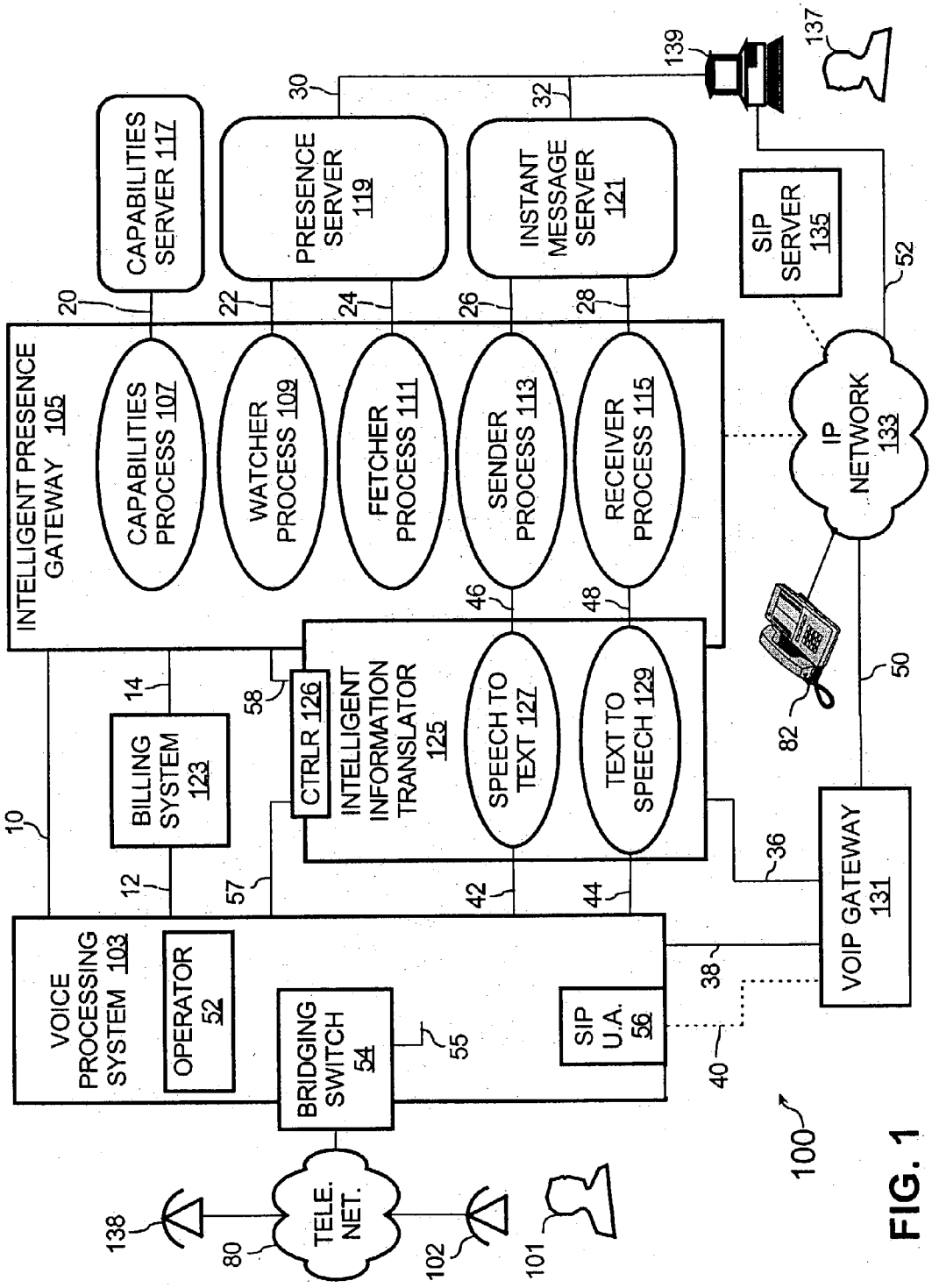

INTELLIGENT PRESENCE GATEWAY 105
CAPABILITIES PROCESS 107
WATCHER PROCESS 109
FETCHER PROCESS 111
SENDER PROCESS 113
RECEIVER PROCESS 115
CAPABILITIES SERVER 117
PRESENCE SERVER 119
INSTANT MESSAGE SERVER 121
SIP SERVER 135
IP NETWORK 133
INTELLIGENT INFORMATION TRANSLATOR 125
CTRLR 126
SPEECH TO TEXT 127
TEXT TO SPEECH 129
BILLING SYSTEM 123
VOICE PROCESSING SYSTEM 103
OPERATOR 52
BRIDGING SWITCH 54
SIP U.A. 56
VOIP GATEWAY 131
TELE. NET.
10
12
14
20
22
24
26
28
30
32
36
38
40
42
44
46
48
50
52
55
57
58
80
82
100
101
102
137
138
139

FIG. 1

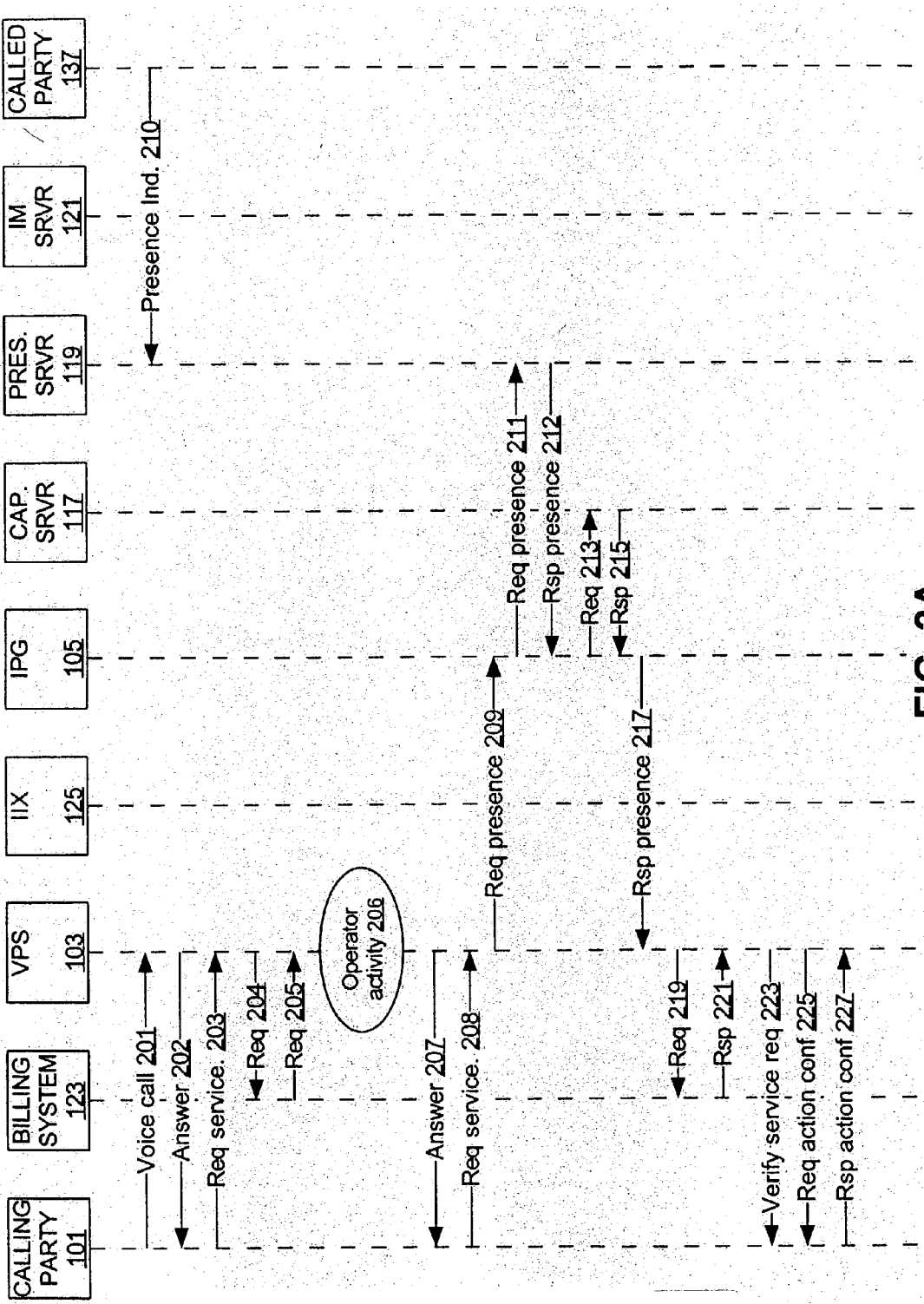

CALLING PARTY 101
BILLING SYSTEM 123
VPS 103
IIX 125
IPG 105
CAP. SRVR 117
PRES. SRVR 119
IM SRVR 121
CALLED PARTY 137
Voice call 201
Answer 202
Req service. 203
Req 204
Req 205
Operator activity 206
Answer 207
Req service. 208
Req presence 209
Presence Ind. 210
Req presence 211
Rsp presence 212
Req 213
Rsp 215
Rsp presence 217
Req 219
Rsp 221
Verify service req 223
Req action conf 225
Rsp action conf 227

FIG. 2A

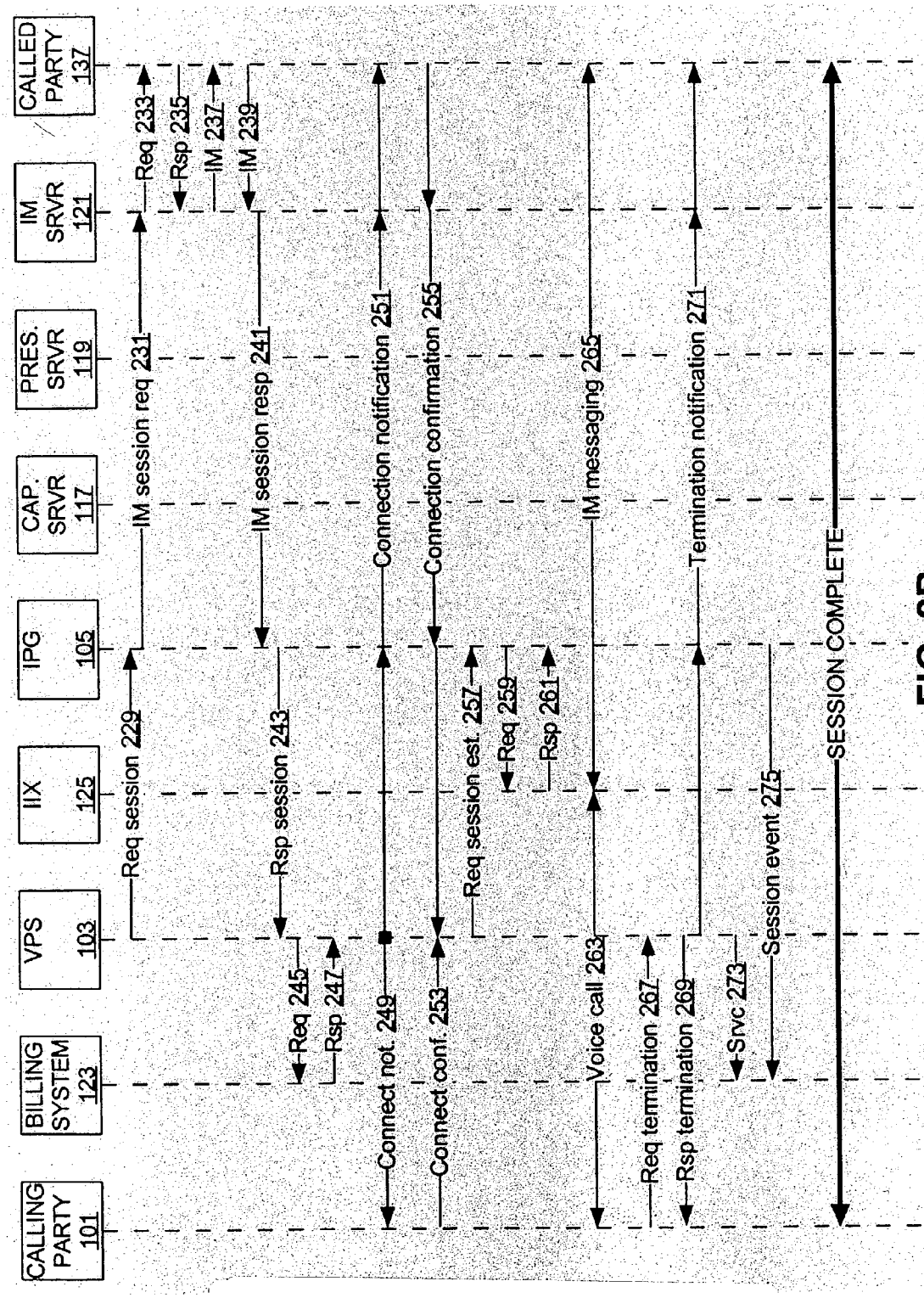

CALLING PARTY 101
BILLING SYSTEM 123
VPS 103
IIX 125
IPG 105
CAP. SRVR 117
PRES. SRVR 119
IM SRVR 121
CALLED PARTY 137
Req session 229
IM session req 231
Req 233
Rsp 235
IM 237
IM 239
IM session resp 241
Rsp session 243
Req 245
Rsp 247
Connect not. 249
Connection notification 251
Connect conf. 253
Connection confirmation 255
Req session est. 257
Req 259
Rsp 261
Voice call 263
IM messaging 265
Req termination 267
Rsp termination 269
Termination notification 271
Srvc 273
Session event 275
SESSION COMPLETE

FIG. 2B

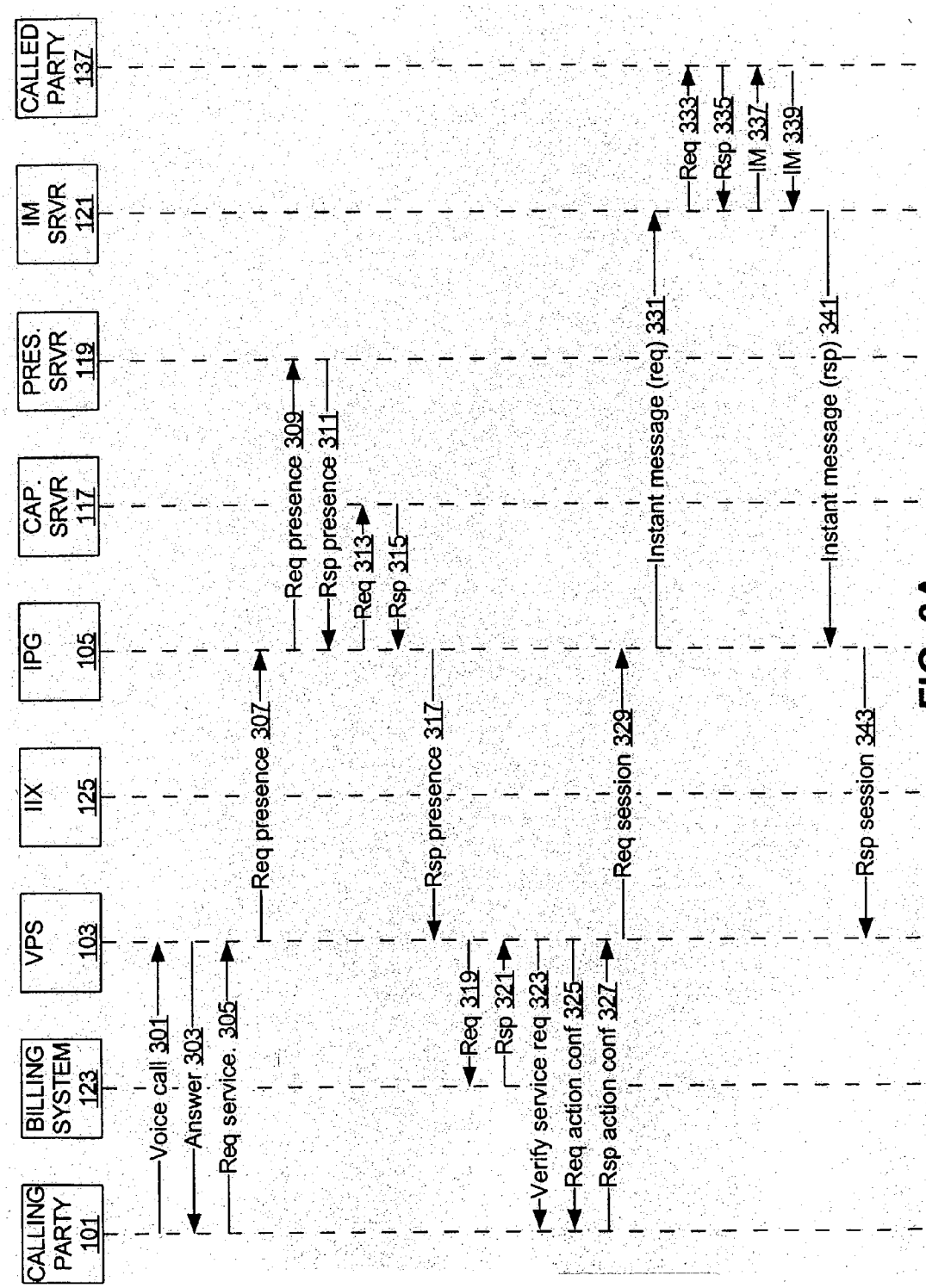

CALLING PARTY 101
BILLING SYSTEM 123
VPS 103
IIX 125
IPG 105
CAP. SRVR 117
PRES. SRVR 119
IM SRVR 121
CALLED PARTY 137
Voice call 301
Answer 303
Req service. 305
Req presence 307
Req presence 309
Rsp presence 311
Req 313
Rsp 315
Rsp presence 317
Req 319
Rsp 321
Verify service req 323
Req action conf 325
Rsp action conf 327
Req session 329
Instant message (req) 331
Req 333
Rsp 335
IM 337
IM 339
Instant message (rsp) 341
Rsp session 343

FIG. 3A

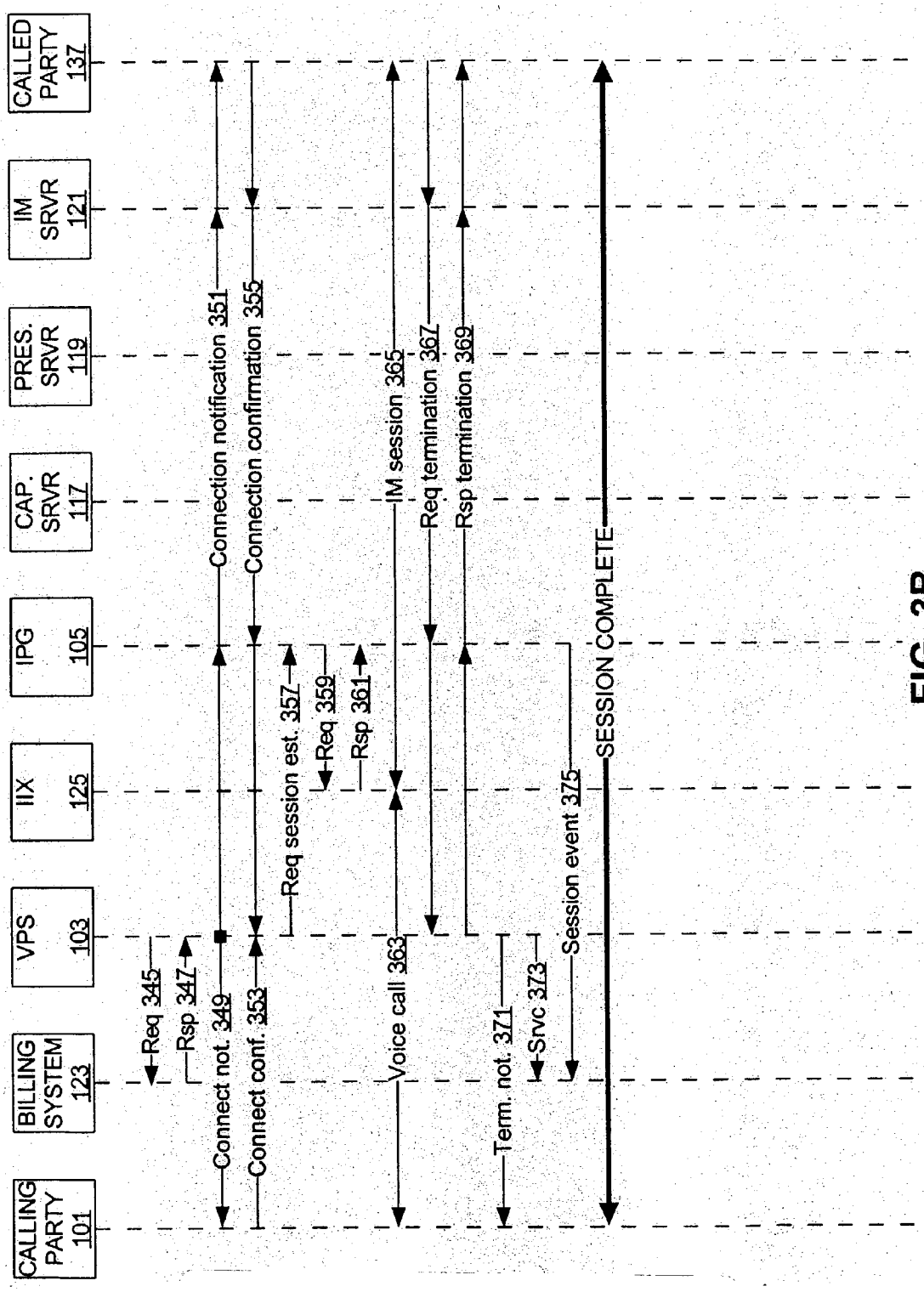

CALLING PARTY 101
BILLING SYSTEM 123
VPS 103
IIX 125
IPG 105
CAP. SRVR 117
PRES. SRVR 119
IM SRVR 121
CALLED PARTY 137
Req 345
Rsp 347
Connect not. 349
Connection notification 351
Connect conf. 353
Connection confirmation 355
Req session est. 357
Req 359
Rsp 361
Voice call 363
IM session 365
Req termination 367
Rsp termination 369
Term. not. 371
Srvc 373
Session event 375
SESSION COMPLETE

FIG. 3B

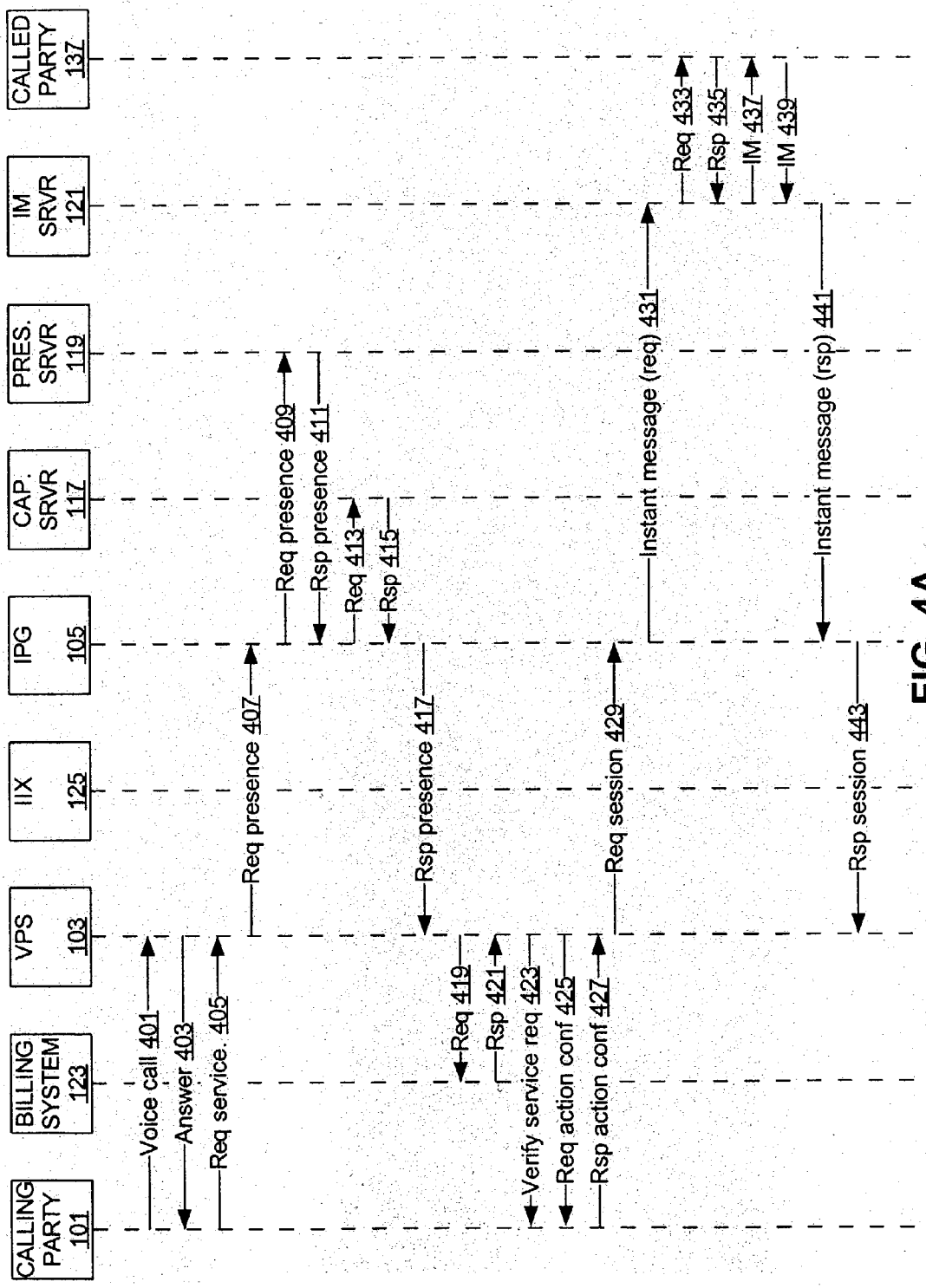

CALLING PARTY 101
BILLING SYSTEM 123
VPS 103
IIX 125
IPG 105
CAP. SRVR 117
PRES. SRVR 119
IM SRVR 121
CALLED PARTY 137
Voice call 401
Answer 403
Req service. 405
Req presence 407
Req presence 409
Rsp presence 411
Req 413
Rsp 415
Rsp presence 417
Req 419
Rsp 421
Verify service req 423
Req action conf 425
Rsp action conf 427
Req session 429
Instant message (req) 431
Req 433
Rsp 435
IM 437
IM 439
Instant message (rsp) 441
Rsp session 443

FIG. 4A

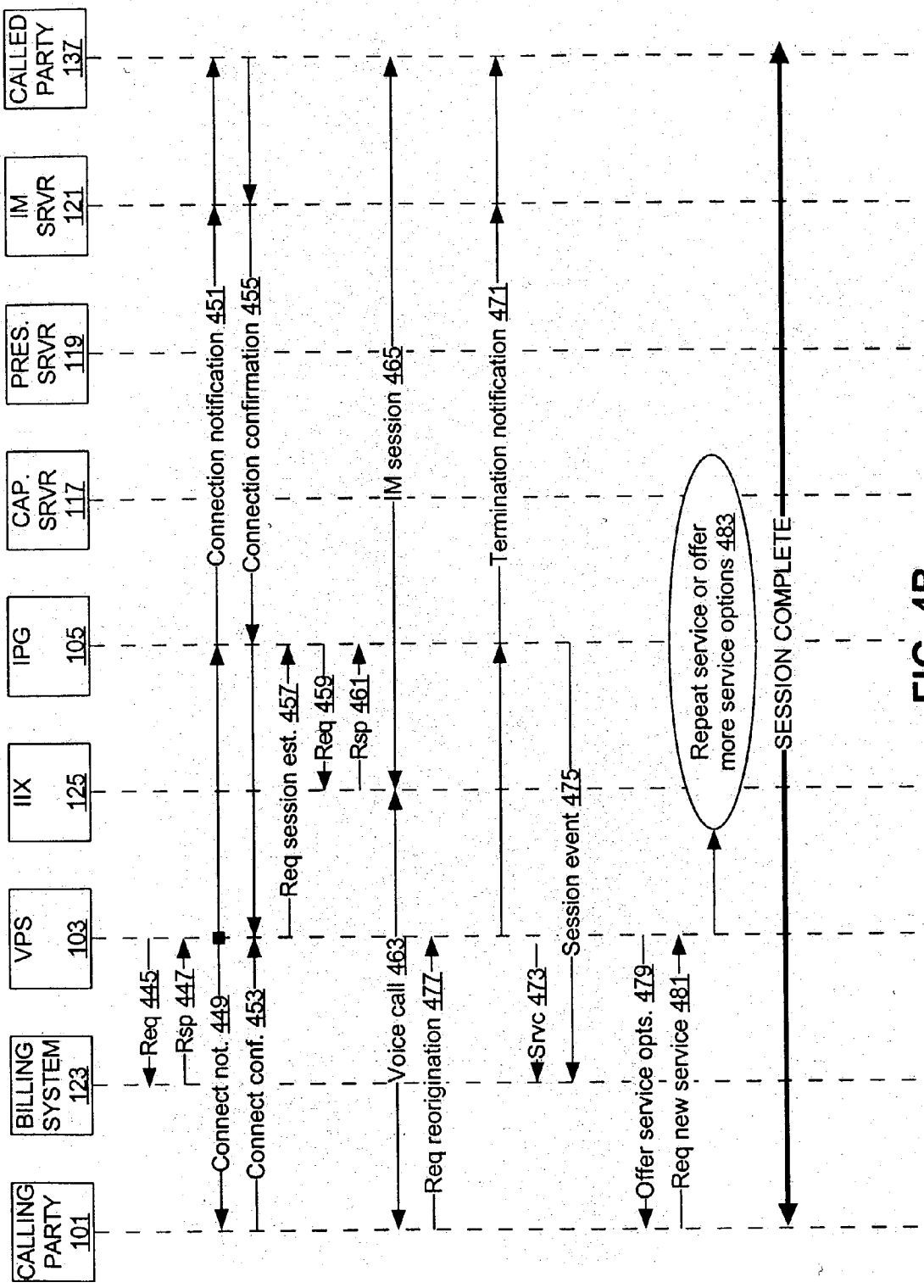

CALLING PARTY 101
BILLING SYSTEM 123
VPS 103
IIX 125
IPG 105
CAP. SRVR 117
PRES. SRVR 119
IM SRVR 121
CALLED PARTY 137
Req 445
Rsp 447
Connect not. 449
Connection notification 451
Connect conf. 453
Connection confirmation 455
Req session est. 457
Req 459
Rsp 461
IM session 465
Voice call 463
Req reorigination 477
Termination notification 471
Srvc 473
Session event 475
Repeat service or offer more service options 483
Offer service opts. 479
Req new service 481
SESSION COMPLETE

FIG. 4B

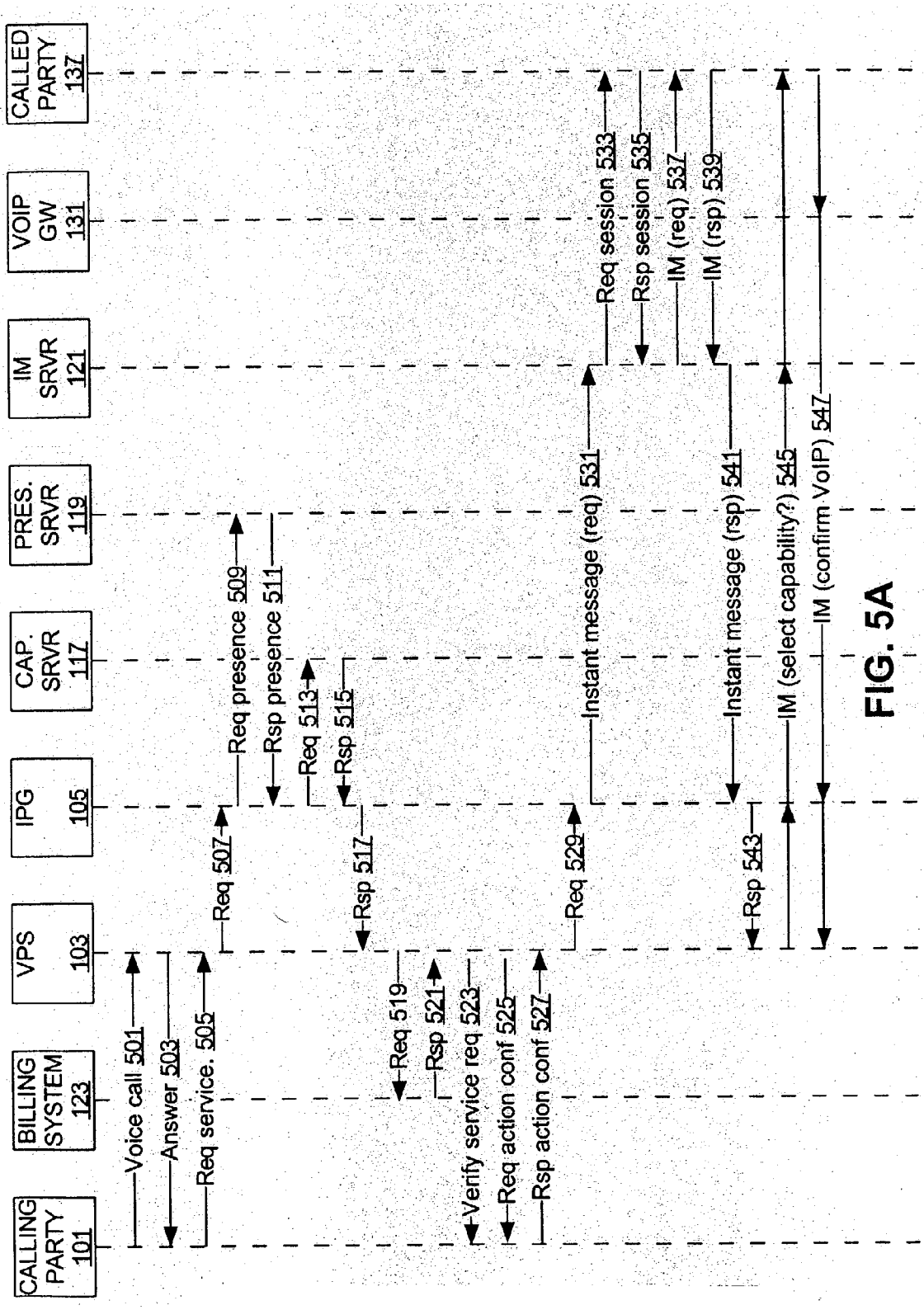

CALLING PARTY 101
BILLING SYSTEM 123
VPS 103
IPG 105
CAP. SRVR 117
PRES. SRVR 119
IM SRVR 121
VOIP GW 131
CALLED PARTY 137
Voice call 501
Answer 503
Req service. 505
Req 507
Req presence 509
Rsp presence 511
Req 513
Rsp 515
Rsp 517
Req 519
Rsp 521
Verify service req 523
Req action conf 525
Rsp action conf 527
Req 529
Instant message (req) 531
Req session 533
Rsp session 535
IM (req) 537
IM (rsp) 539
Instant message (rsp) 541
Rsp 543
IM (select capability?) 545
IM (confirm VoIP) 547

FIG. 5A

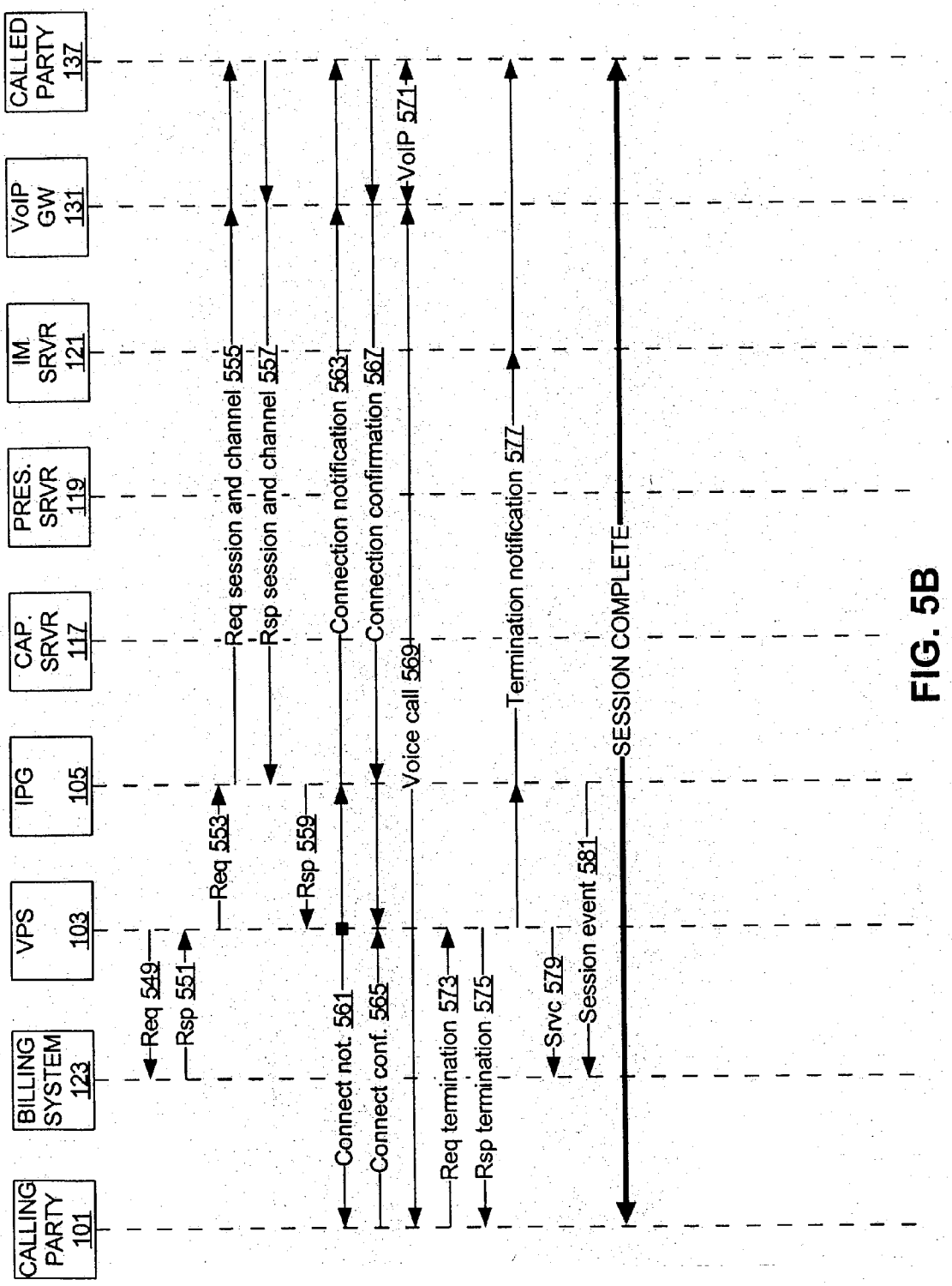

CALLING PARTY 101
BILLING SYSTEM 123
VPS 103
IPG 105
CAP. SRVR 117
PRES. SRVR 119
IM SRVR 121
VoIP GW 131
CALLED PARTY 137
Req 549
Rsp 551
Req 553
Rsp 559
Req session and channel 555
Rsp session and channel 557
Connect not. 561
Connect conf. 565
Connection notification 563
Connection confirmation 567
Voice call 569
VoIP 571
Req termination 573
Rsp termination 575
Termination notification 577
Srvc 579
Session event 581
SESSION COMPLETE

FIG. 5B

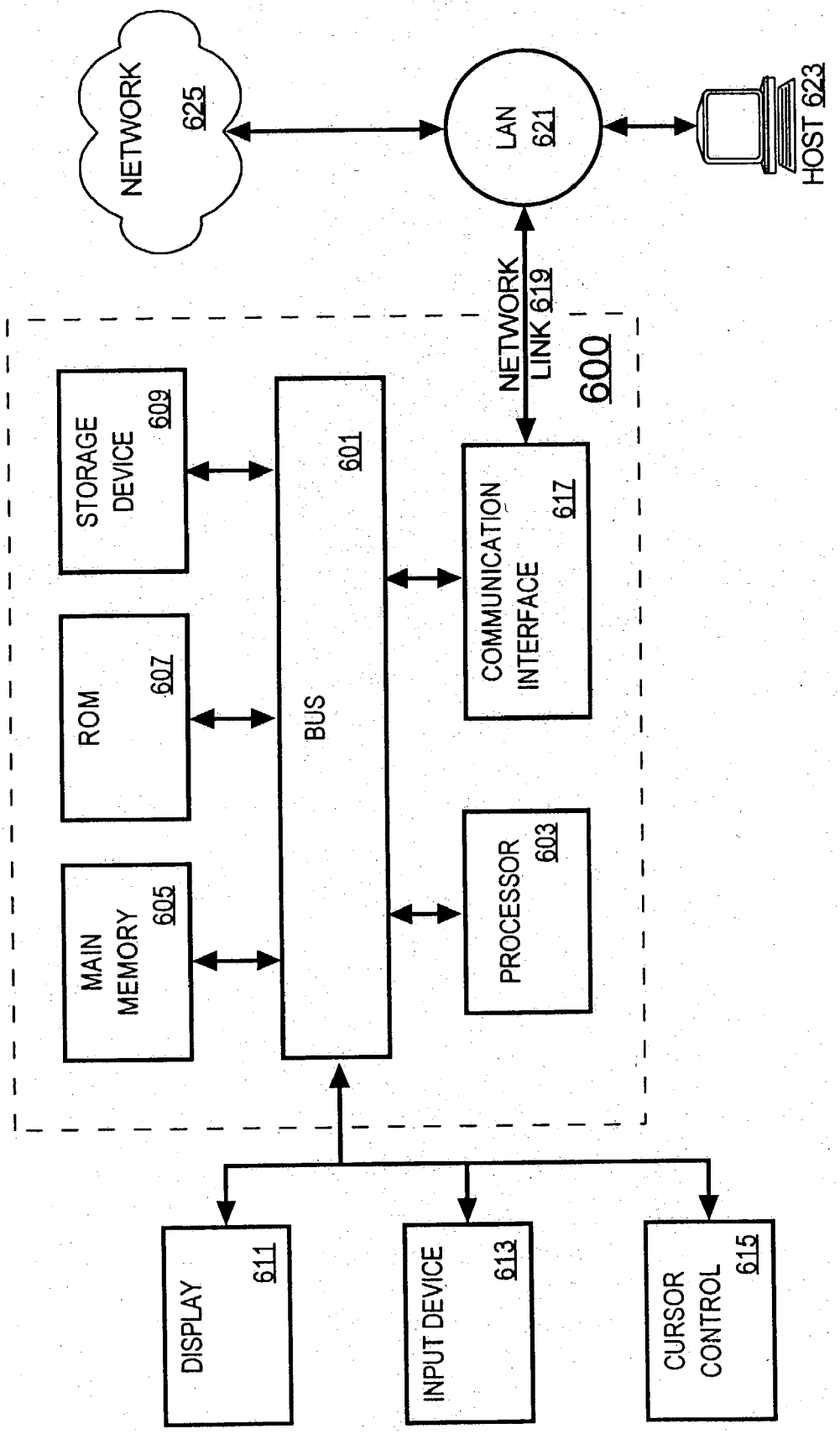

NETWORK
625
LAN
621
HOST 623
NETWORK
LINK 619
600
STORAGE
DEVICE
609
BUS
601
COMMUNICATION
INTERFACE
617
ROM
607
MAIN
MEMORY
605
PROCESSOR
603
DISPLAY
611
INPUT DEVICE
613
CURSOR
CONTROL
615

FIG. 6

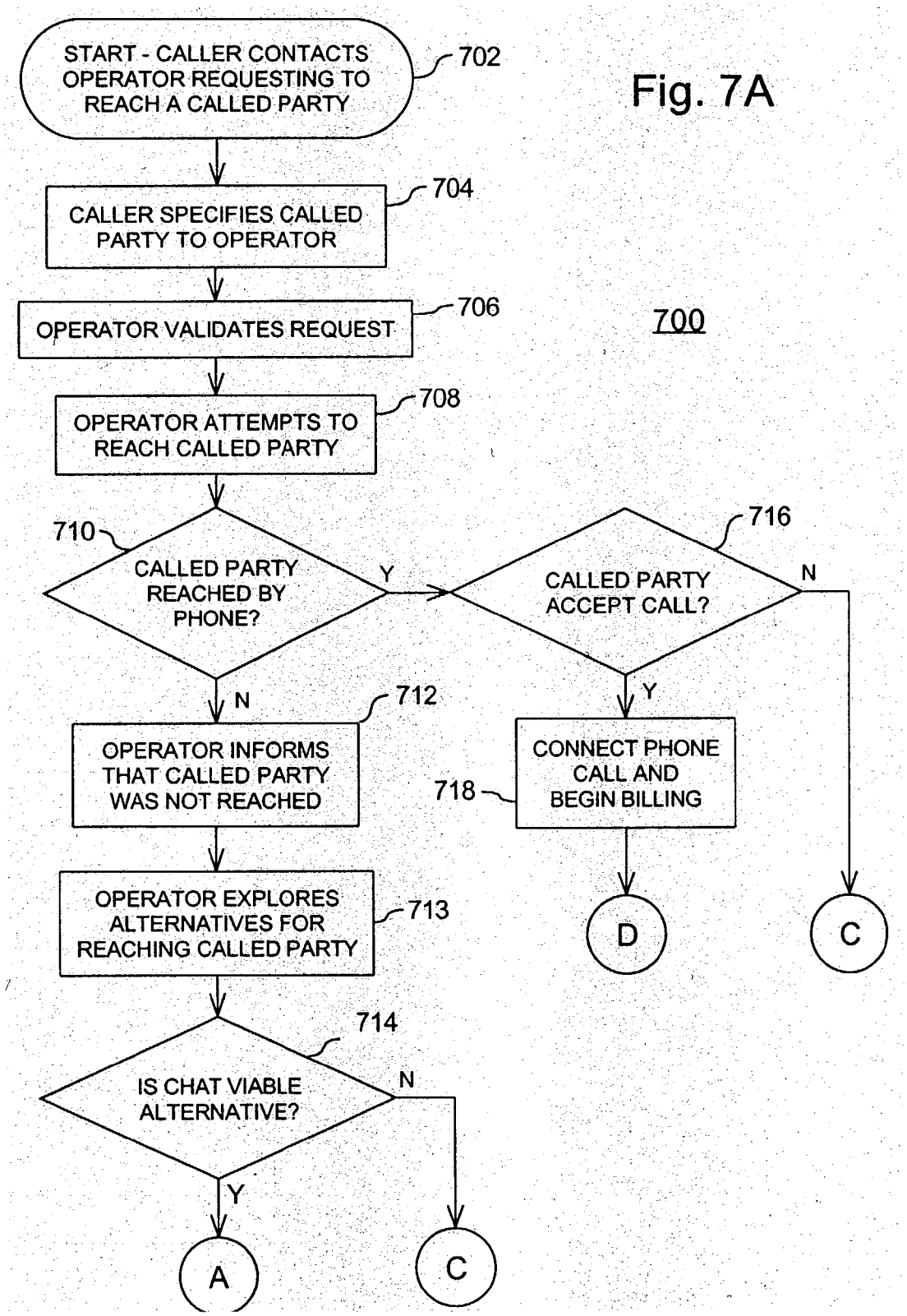
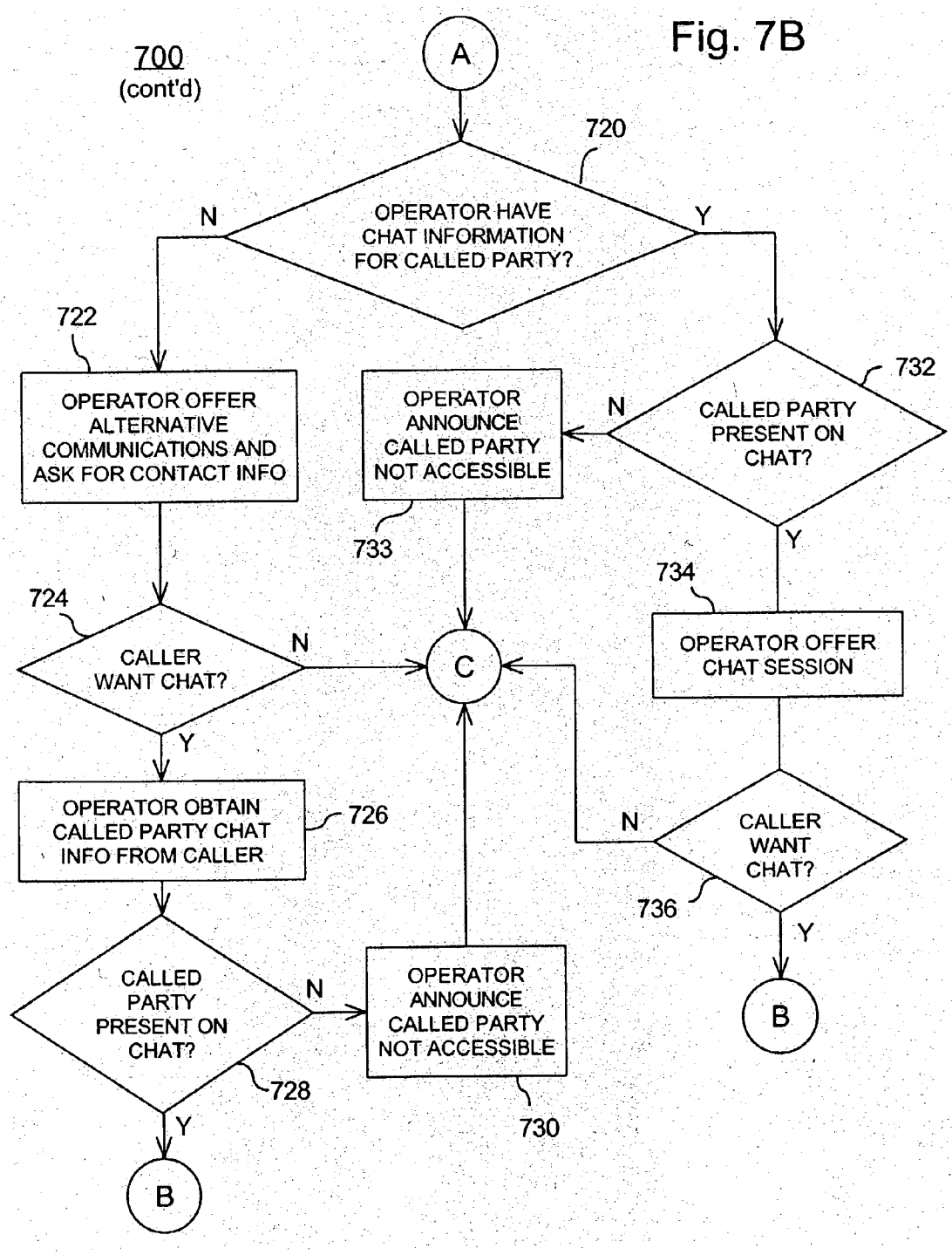

START - CALLER CONTACTS OPERATOR REQUESTING TO REACH A CALLED PARTY
702
CALLER SPECIFIES CALLED PARTY TO OPERATOR
704
OPERATOR VALIDATES REQUEST
706
OPERATOR ATTEMPTS TO REACH CALLED PARTY
708
710
CALLED PARTY REACHED BY PHONE?
Y
N
716
CALLED PARTY ACCEPT CALL?
N
Y
712
OPERATOR INFORMS THAT CALLED PARTY WAS NOT REACHED
718
CONNECT PHONE CALL AND BEGIN BILLING
OPERATOR EXPLORES ALTERNATIVES FOR REACHING CALLED PARTY
713
714
IS CHAT VIABLE ALTERNATIVE?
N
Y
A
C
D
C
700

Fig. 7A

Fig. 7B


700
(cont'd)
A
720
OPERATOR HAVE CHAT INFORMATION FOR CALLED PARTY?
N
Y
722
OPERATOR OFFER ALTERNATIVE COMMUNICATIONS AND ASK FOR CONTACT INFO
OPERATOR ANNOUNCE CALLED PARTY NOT ACCESSIBLE
733
732
CALLED PARTY PRESENT ON CHAT?
N
Y
734
OPERATOR OFFER CHAT SESSION
724
CALLER WANT CHAT?
N
Y
C
OPERATOR OBTAIN CALLED PARTY CHAT INFO FROM CALLER
726
CALLER WANT CHAT?
N
736
Y
CALLED PARTY PRESENT ON CHAT?
N
728
Y
OPERATOR ANNOUNCE CALLED PARTY NOT ACCESSIBLE
730
B
B

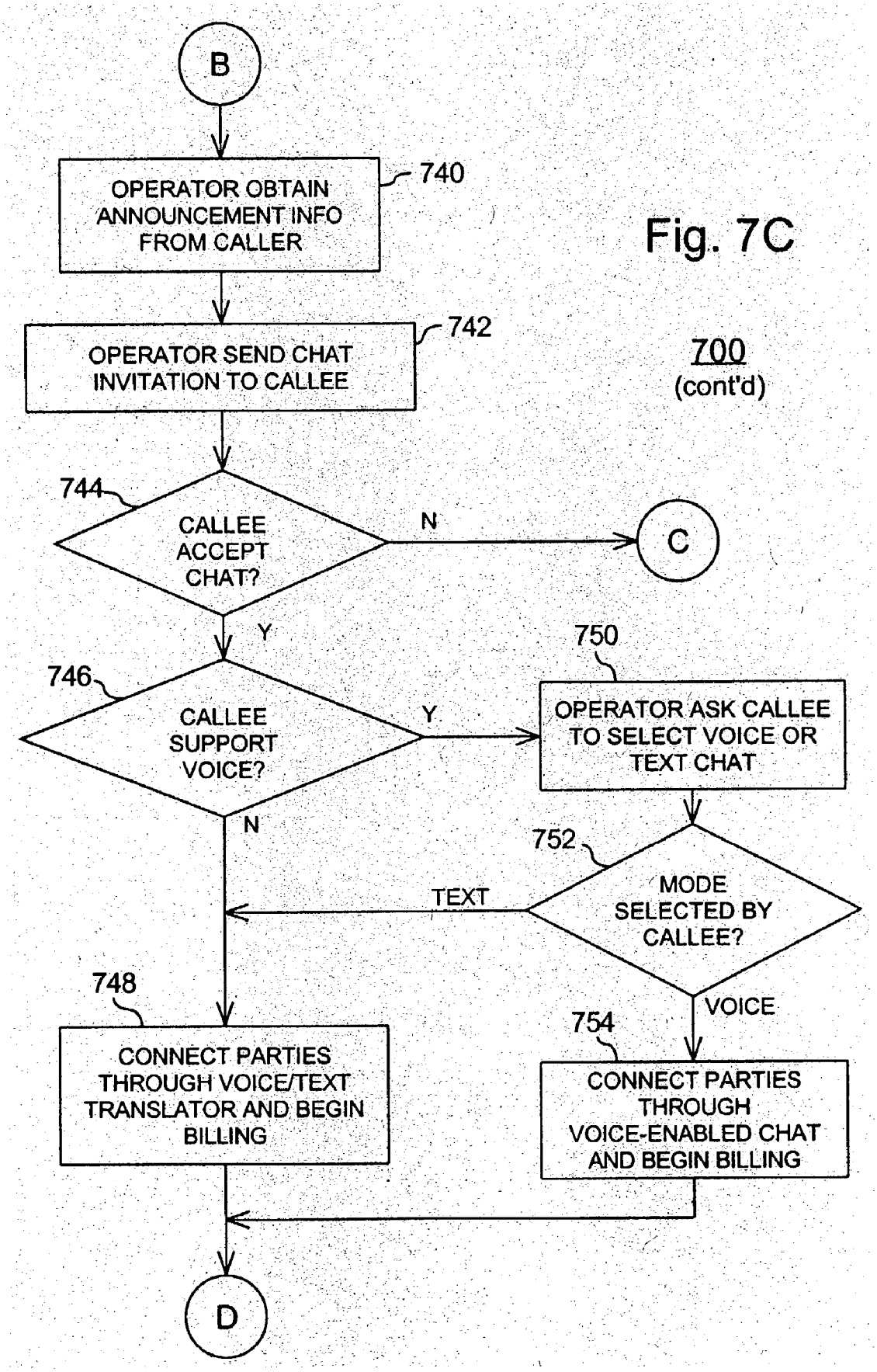


Fig. 7C

700
(cont'd)

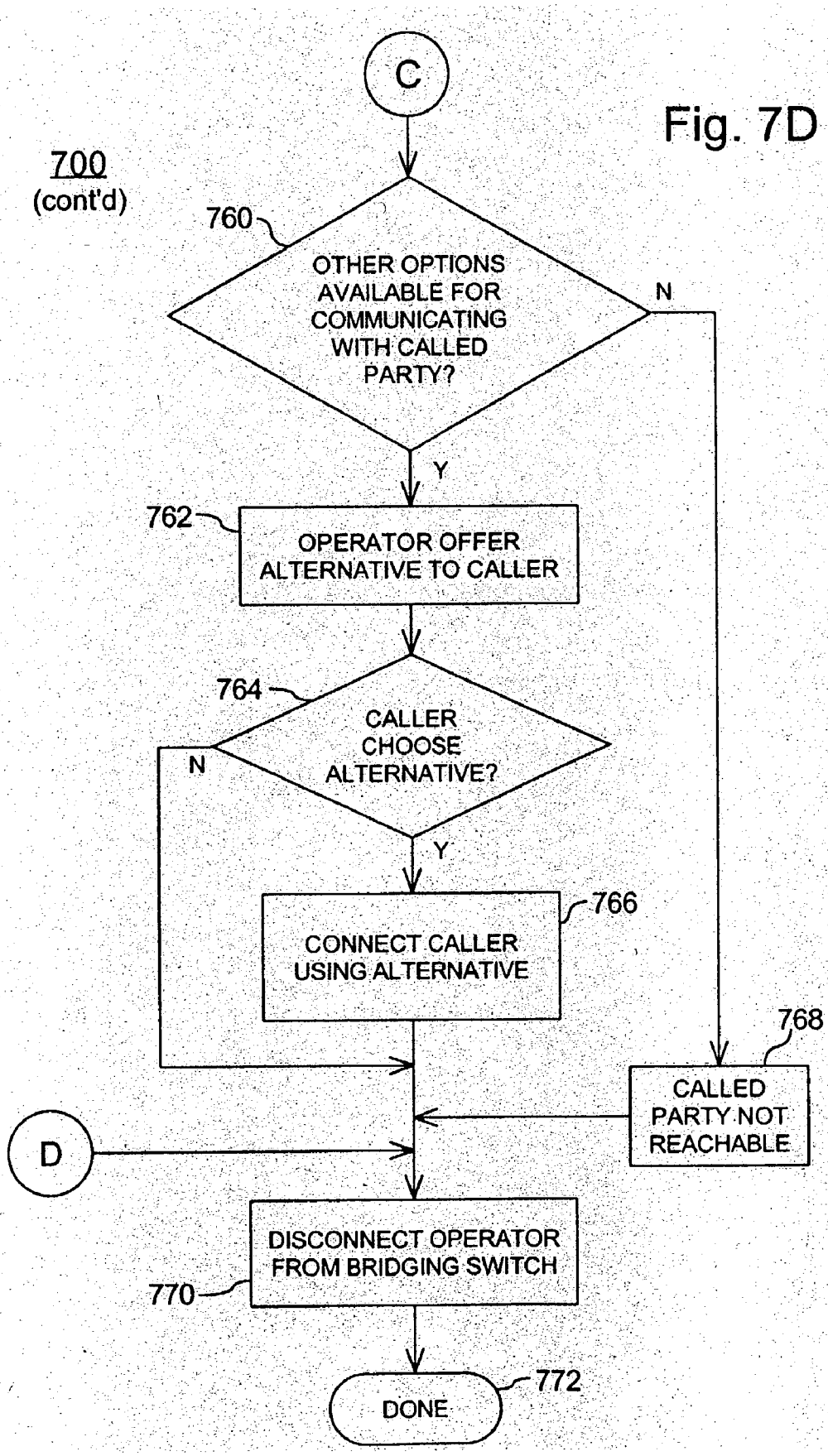

C
700
(cont'd)
760
OTHER OPTIONS AVAILABLE FOR COMMUNICATING WITH CALLED PARTY?
N
Y
762
OPERATOR OFFER ALTERNATIVE TO CALLER
764
CALLER CHOOSE ALTERNATIVE?
N
Y
766
CONNECT CALLER USING ALTERNATIVE
768
CALLED PARTY NOT REACHABLE
D
DISCONNECT OPERATOR FROM BRIDGING SWITCH
770
DONE
772

Fig. 7D

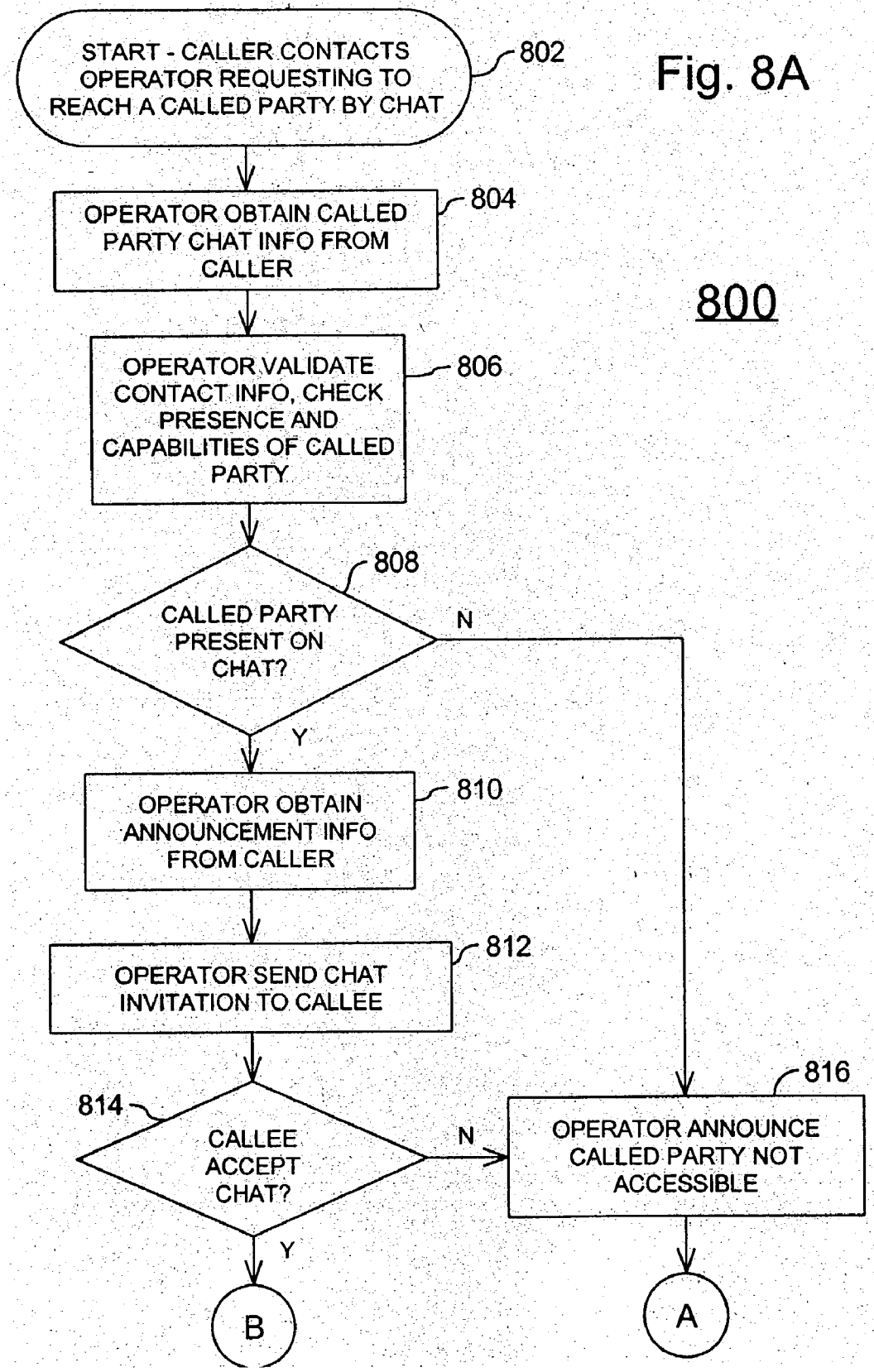

START - CALLER CONTACTS OPERATOR REQUESTING TO REACH A CALLED PARTY BY CHAT
802
OPERATOR OBTAIN CALLED PARTY CHAT INFO FROM CALLER
804
OPERATOR VALIDATE CONTACT INFO, CHECK PRESENCE AND CAPABILITIES OF CALLED PARTY
806
CALLED PARTY PRESENT ON CHAT?
808
N
Y
OPERATOR OBTAIN ANNOUNCEMENT INFO FROM CALLER
810
OPERATOR SEND CHAT INVITATION TO CALLEE
812
CALLEE ACCEPT CHAT?
814
N
Y
OPERATOR ANNOUNCE CALLED PARTY NOT ACCESSIBLE
816
B
A

Fig. 8A

800

Fig. 8B

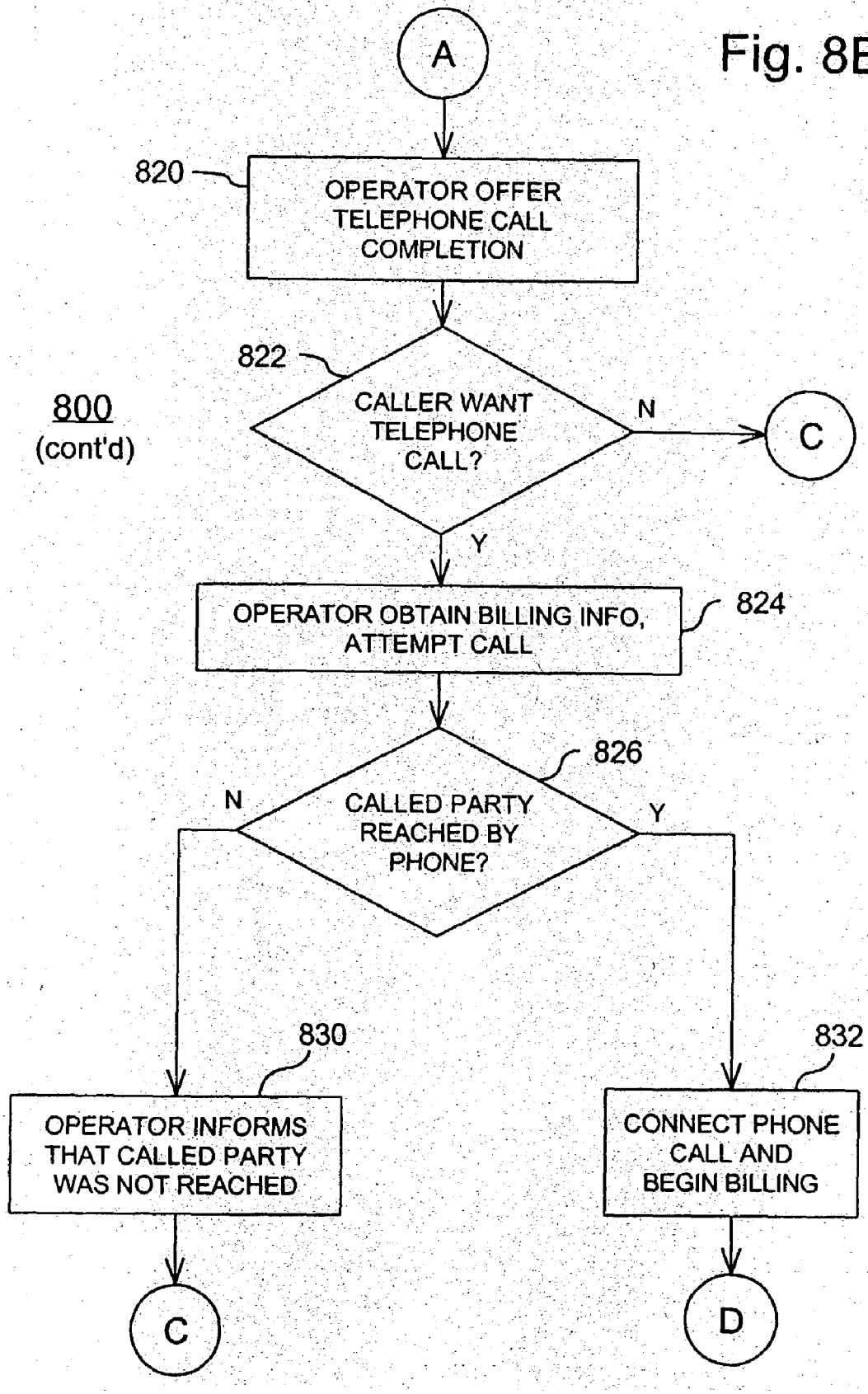
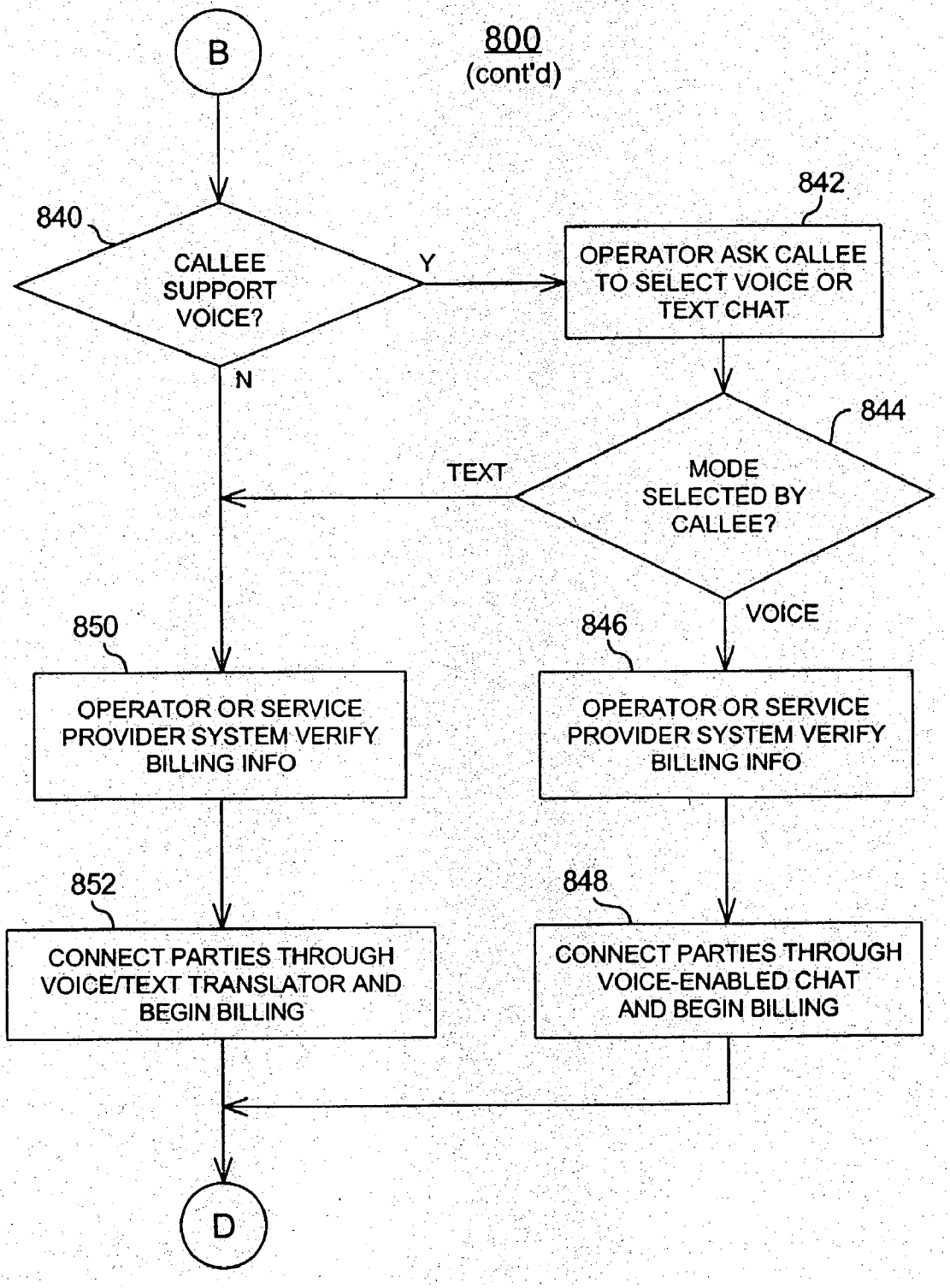

A
820
OPERATOR OFFER TELEPHONE CALL COMPLETION
822
800
(cont'd)
CALLER WANT TELEPHONE CALL?
N
C
Y
OPERATOR OBTAIN BILLING INFO, ATTEMPT CALL
824
826
N
CALLED PARTY REACHED BY PHONE?
Y
830
832
OPERATOR INFORMS THAT CALLED PARTY WAS NOT REACHED
CONNECT PHONE CALL AND BEGIN BILLING
C
D

Fig. 8C


B
800
(cont'd)
840
CALLEE SUPPORT VOICE?
Y
842
OPERATOR ASK CALLEE TO SELECT VOICE OR TEXT CHAT
N
844
MODE SELECTED BY CALLEE?
TEXT
VOICE
850
OPERATOR OR SERVICE PROVIDER SYSTEM VERIFY BILLING INFO
846
OPERATOR OR SERVICE PROVIDER SYSTEM VERIFY BILLING INFO
852
CONNECT PARTIES THROUGH VOICE/TEXT TRANSLATOR AND BEGIN BILLING
848
CONNECT PARTIES THROUGH VOICE-ENABLED CHAT AND BEGIN BILLING
D

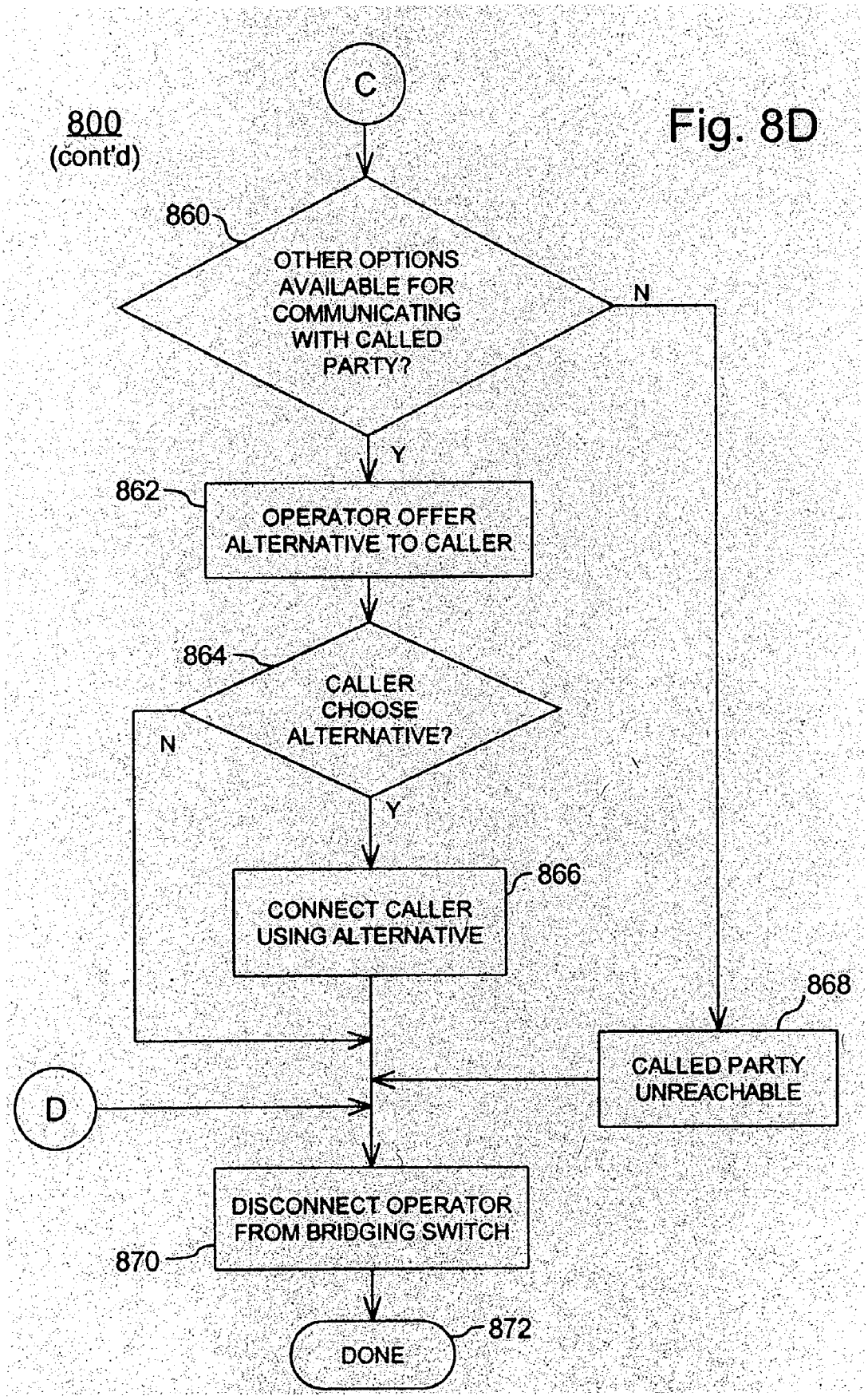
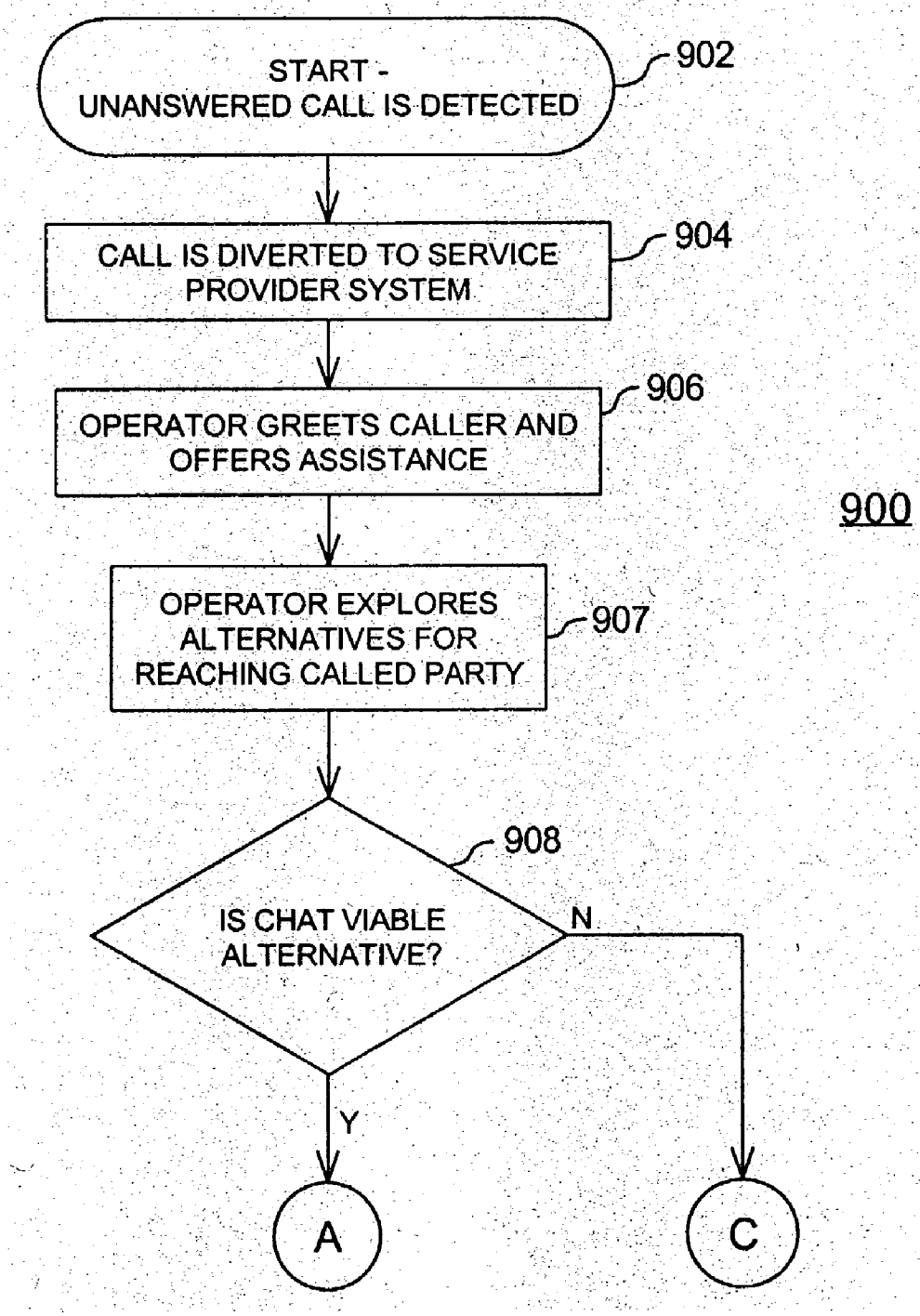

800
(cont'd)
C
860
OTHER OPTIONS AVAILABLE FOR COMMUNICATING WITH CALLED PARTY?
N
Y
862
OPERATOR OFFER ALTERNATIVE TO CALLER
864
CALLER CHOOSE ALTERNATIVE?
N
Y
866
CONNECT CALLER USING ALTERNATIVE
868
CALLED PARTY UNREACHABLE
D
DISCONNECT OPERATOR FROM BRIDGING SWITCH
870
DONE
872

Fig. 8D

Fig. 9A


START - UNANSWERED CALL IS DETECTED
902
CALL IS DIVERTED TO SERVICE PROVIDER SYSTEM
904
OPERATOR GREETS CALLER AND OFFERS ASSISTANCE
906
900
OPERATOR EXPLORES ALTERNATIVES FOR REACHING CALLED PARTY
907
IS CHAT VIABLE ALTERNATIVE?
908
N
Y
A
C

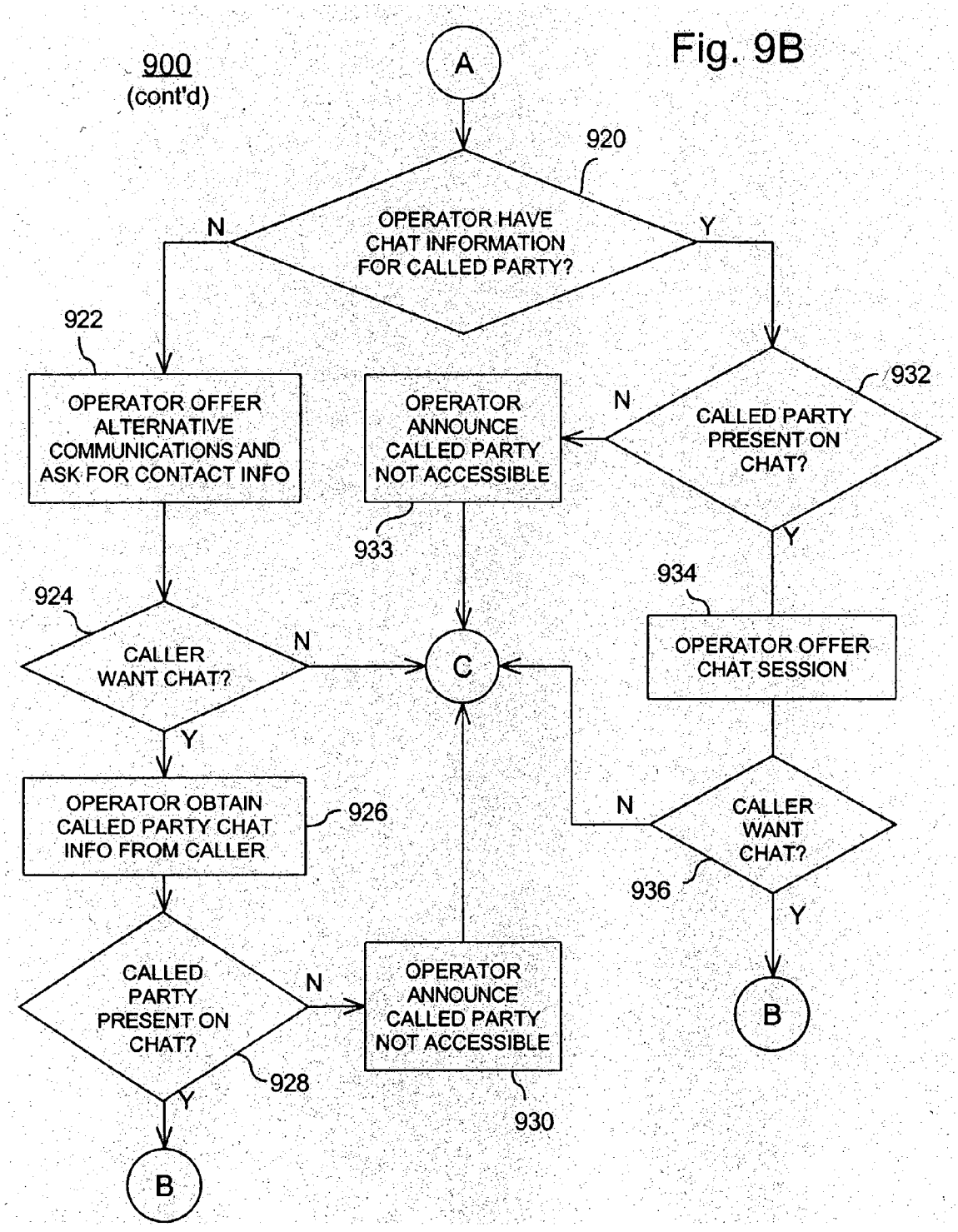
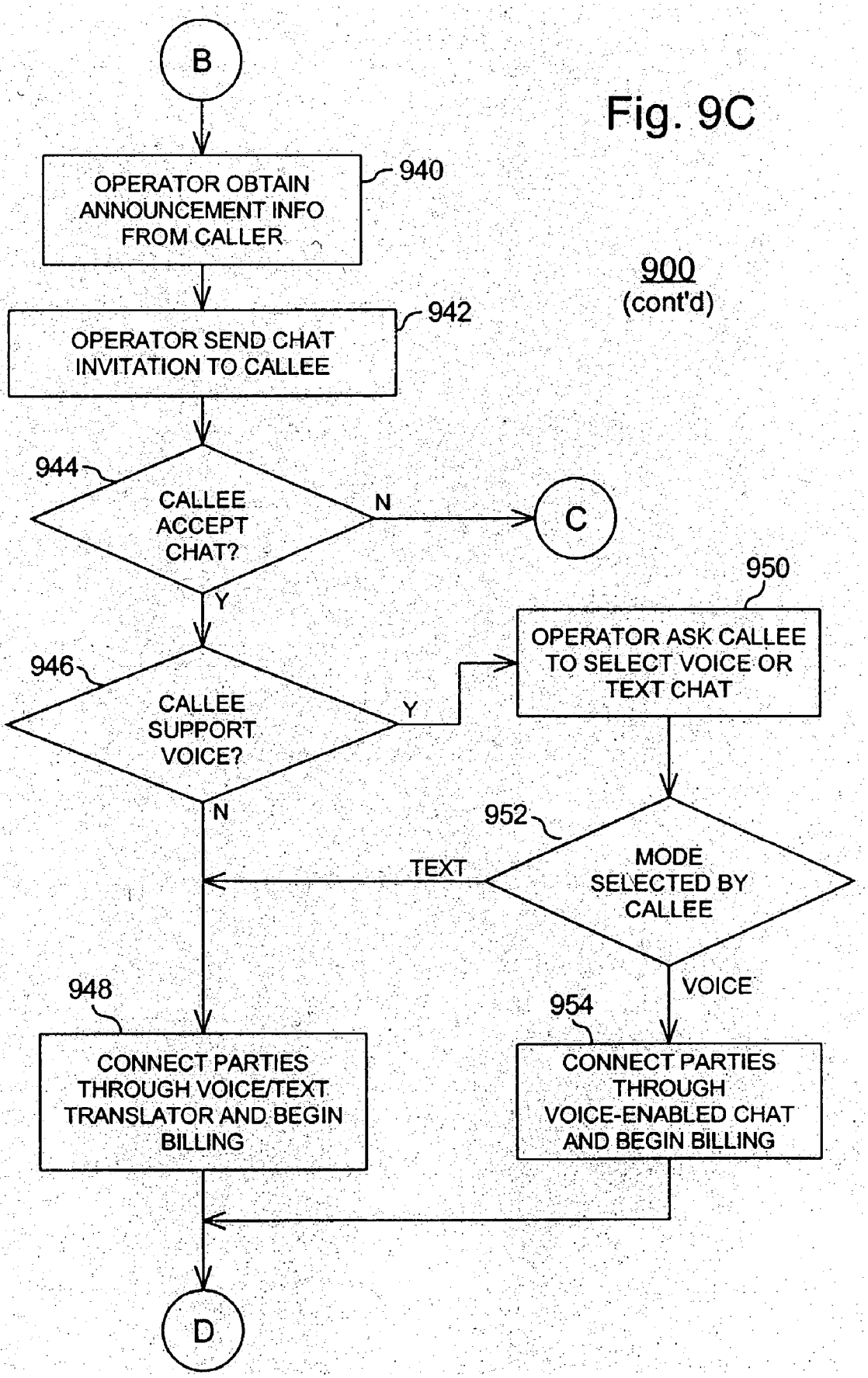

900
(cont'd)
A
920
OPERATOR HAVE CHAT INFORMATION FOR CALLED PARTY?
N
Y
922
OPERATOR OFFER ALTERNATIVE COMMUNICATIONS AND ASK FOR CONTACT INFO
OPERATOR ANNOUNCE CALLED PARTY NOT ACCESSIBLE
933
932
CALLED PARTY PRESENT ON CHAT?
N
Y
934
OPERATOR OFFER CHAT SESSION
924
CALLER WANT CHAT?
N
Y
C
OPERATOR OBTAIN CALLED PARTY CHAT INFO FROM CALLER
926
CALLER WANT CHAT?
N
936
Y
CALLED PARTY PRESENT ON CHAT?
N
928
Y
OPERATOR ANNOUNCE CALLED PARTY NOT ACCESSIBLE
930
B
B

Fig. 9B

Fig. 9C


B
OPERATOR OBTAIN ANNOUNCEMENT INFO FROM CALLER
940
OPERATOR SEND CHAT INVITATION TO CALLEE
942
900
(cont'd)
944
CALLEE ACCEPT CHAT?
N
C
Y
946
CALLEE SUPPORT VOICE?
Y
950
OPERATOR ASK CALLEE TO SELECT VOICE OR TEXT CHAT
N
952
MODE SELECTED BY CALLEE
TEXT
VOICE
948
CONNECT PARTIES THROUGH VOICE/TEXT TRANSLATOR AND BEGIN BILLING
954
CONNECT PARTIES THROUGH VOICE-ENABLED CHAT AND BEGIN BILLING
D

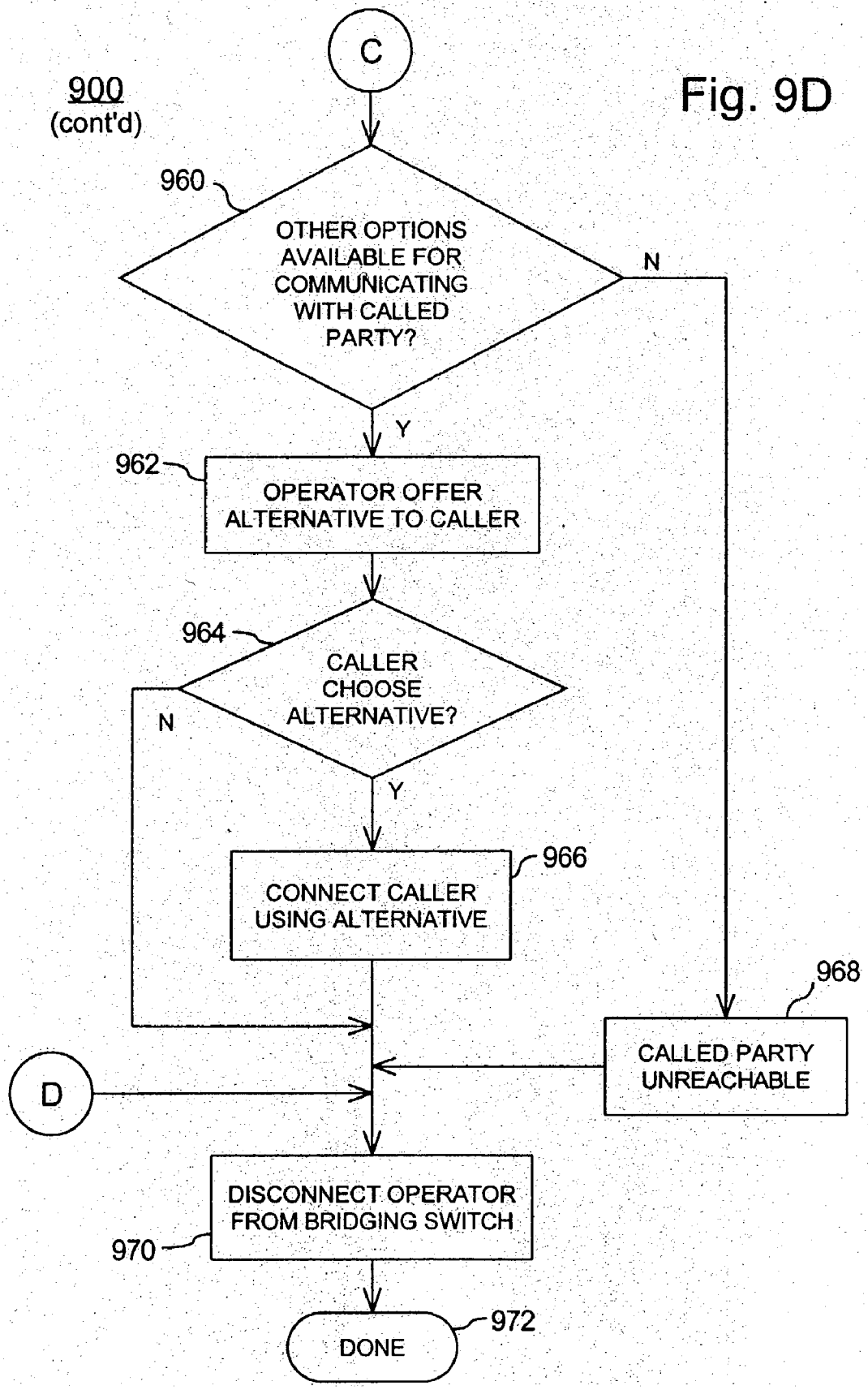

900
(cont'd)
C
960
OTHER OPTIONS AVAILABLE FOR COMMUNICATING WITH CALLED PARTY?
N
Y
962
OPERATOR OFFER ALTERNATIVE TO CALLER
964
CALLER CHOOSE ALTERNATIVE?
N
Y
966
CONNECT CALLER USING ALTERNATIVE
968
CALLED PARTY UNREACHABLE
D
DISCONNECT OPERATOR FROM BRIDGING SWITCH
970
DONE
972

Fig. 9D

ENHANCED SERVICES CALL COMPLETION

PRIORITY CLAIM AND CROSS-REFERENCE

[0001] The present application claims priority to U.S. Provisional Patent Application Serial No. 60/369,271 (Atty. Docket CDR-02-002PR), filed Apr. 2, 2002, entitled "Chat-Accessible Services in a Communication System," assigned to the assignee of the present application and incorporated herein by reference its entirety.

[0002] The present application is also related to the following co-pending applications, which are assigned to the assignee of the present application and incorporated herein by reference in their entireties:

[0003] U.S. patent application Ser. No. _____ (Docket No. CDR-02-012), filed concurrently herewith and entitled "Billing System for Services Provided via Instant Communications;"

[0004] U.S. patent application Ser. No. _____ (Docket No. CDR-02-013), filed concurrently herewith and entitled "Messaging Response System;"

[0005] U.S. patent application Ser. No. _____ (Docket No. CDR-02-014), filed concurrently herewith and entitled "Communications Gateway with Messaging Communications Interface;"

[0006] U.S. patent application Ser. No. _____ (Docket No. CDR-02-015), filed concurrently herewith and entitled "Media Translator;"

[0007] U.S. patent application Ser. No. _____ (Docket No. CDR-02-016), filed concurrently herewith and entitled "Billing System for Communications Services involving Telephony and Instant Communications;"

[0008] U.S. patent application Ser. No. _____ (Docket No. CDR-02-017), filed concurrently herewith and entitled "Call Completion via Instant Communications Client;"

[0009] U.S. patent application Ser. No. _____ (Docket No. CDR-02-019), filed concurrently herewith and entitled "Providing of Presence Information to a Telephony Services System;" and

[0010] U.S. patent application Ser. No. _____ (Docket No. CDR-02-020), filed concurrently herewith and entitled "Telephony Services System with Instant Communications Enhancements."

TECHNICAL FIELD

[0011] The present invention relates to communications systems and methods and more particularly to facilitating the establishment of communications among users of communications systems.

BACKGROUND

[0012] A communications system serves to transport information among users or among points served by the system. One way to maximize the usefulness of a communications system is to facilitate the establishment of communications among users of the system. As one party seeks to communicate with another party, this may involve assisting in obtaining contact information for a given user or destination, or providing a variety of methods by which communication may be arranged.

[0013] For example, in a telephone network, a large proportion of calls are completed by direct dialing from one telephone to another. However, further effectiveness is achieved by the offering of interactive operator services or "enhanced services" to facilitate communications among parties. In some cases, enhanced services may be provided to help a caller by locating a telephone number for a called party or by connecting the caller to the called party. An enhanced service may also allow a caller to exercise a broad range of billing arrangements, such as calling card billing, billing to subscriber account numbers and collect calling.

[0014] To access an enhanced service in a telephony network, a caller may dial a telephone number such as '0' for an operator or '1-800-COLLECT' (TM) to reach a collect call platform or yet another number to reach a prepaid calling card platform. Through interaction with an automated VRU or a human operator in an enhanced services call processing platform, the caller typically provides information by voice or by in-band DTMF tones to convey the nature of service desired, to specify a called party, and to pass along information relevant to billing and authentication.

[0015] The offering of enhanced services is beneficial to a commercial service provider at least because increased call completion leads to increased billable usage of the system. The service provider may also seek to offer differentiating services to attract business or realize an additional revenue by charging fees for the use of such services.

[0016] Especially with the advent of newer types of communication, further measures are required to enhance the effectiveness of a communication system as parties seek to communicate with one another. In particular, it is desirable to maximize the ease with which one party is able to communicate with another party through whatever means are available. For a variety of reasons, a called party may not be reachable at a particular telephone number or may simply prefer to engage in other modes of communication rather than by phone.

SUMMARY

[0017] The present invention addresses the need to increase the flexibility and ease with which parties may establish communications. As will be described, the present invention achieves advantages in establishing communications despite the increased use of multiple, and often disparate, modes of communication such as telephony and instant messaging.

[0018] One aspect of the present invention relates to a method and system of processing a telephone call to a called party, in which a telephone call originated by a calling party from a telephone is received, and the telephone call to the called party is completed via a text-based instant messaging session. This may be especially desirable to parties already engaged in voice communications with others but who are willing and able to simultaneously carry on text chat communications. This capability may also increase completion of calls to parties who do not have voice-enabled messaging clients and audio hardware.

[0019] Another aspect of the present invention involves a method of processing a telephone call to a called party, in which a telephone call originated by a calling party is received, a presence identifier of the called party is obtained, and then the telephone call is coupled for interactive communications with the called party based on the presence identifier. Examples of the presence identifier include: screen name, an alias, a handle, an electronic pseudonym, a chat identifier, an address of some nature, and an instant message identifier. The presence identifier is a handle that can be used to query a server for determining a communications state of the called party, indicating at least whether the called party is available to accept delivery of instant communications.

[0020] In various embodiments, the presence identifier may correspond to any type of identifier associated with the called party and can be obtained, for example, by prompting the calling party for the presence identifier and receiving the presence identifier over the telephone call. Alternatively, the caller may provide a telephone number, e-mail address or other identifier of the called party, whereupon a database may be consulted to obtain a presence identifier corresponding to the identifier provided by the caller.

[0021] Yet another aspect of the present invention pertains to a method and system for completing a telephone call to a called party, in which a telephone call originated by a calling party is received and, after determining that the called party is online and available for accepting delivery of instant communications, an instant communication session is initiated between the calling party and the called party. The instant communication session can be any session in which messages are delivered at a rate capable of supporting an interactive session, such as a chat session, a voice-enabled chat session, an instant messaging session, an Internet Relay Chat session, and setting up a Voice-over-IP (VoIP) session between the calling party and the called party.

[0022] Still another aspect of the present invention includes a method of processing a telephone call to a called party, comprising: receiving a telephone call originated by a calling party; obtaining a telephone number of the called party; and attempting to reach the called party at the telephone number. If the called party is not reached at the telephone number, then the method includes: obtaining a presence identifier corresponding to the called party; and connecting the telephone call to the called party via an instant communications client based on the presence identifier.

[0023] In other aspects of embodiments of the invention, human or automated relay services for deaf, blind and people with other forms of disabilities can be provided to augment and provide additional service offerings and telecommunications services for people with disabilities. For example, when a called party is accessible only by textual chat, a blind person wanting to communicate with the called party via chat must find another party willing to help with the communication or seek out a computer workstation or the like equipped with a chat client and speech synthesis capabilities. Implementations of the present invention allow a blind person to use any telephone connected to the traditional public telephone network to interact with another party who is at that time available on, or using, a textual-based instant messaging system. This capability may be provided without requiring or burdening relay systems that are used by the deaf to perform textual communications. In some aspects, the invention can significantly simplify the ability of such users to participate in new and emerging forms of instant communications.

[0024] In another aspect, embodiments of the present invention can be integrated with billing services to provide a flexible arrangement for charging and recovering costs of providing instant messaging services.

[0025] Another exemplary embodiment of the present invention discloses, in a communication system, a method of establishing communication among parties coupled to the communication system. The method comprising the steps of, from a first party using a telephone device, receiving a request to establish communications with a second party, determining whether instant communications may be established with the second party, and responsive to at least whether instant communications may be established with the second party, establishing communications, comprising instant communications, between the first party and the second party.

[0026] Another exemplary embodiment of the present invention discloses, in a communication system, a method of establishing communication among parties coupled to the communication system. The method comprising the steps of, from a first party, receiving a request to establish communications with a second party using a first mode of communication, determining whether the second party is accessible via the first mode of communication, responsive to at least whether the second party is accessible via the first mode of communicating, determining a second mode of communicating with the second party, and establishing communications, comprising the second mode of communication, between the first party and the second party.

[0027] Another exemplary embodiment of the present invention discloses, in a communication system, a method of establishing communication among parties coupled to the communication system. The method comprising the steps of detecting a telephone call from a first party to a second party, determining that the telephone call will not be answered by a telephone device to which the call has been placed, determining whether instant communications may be established with the second party, and responsive to at least whether instant communications may be established with the second party, establishing communications, comprising instant communications, between the first party and the second party.

[0028] Another exemplary embodiment of the present invention discloses a method for establishing communications among parties comprising the steps of providing a communication system acting to establish communications among telephones and instant communications clients, making available a telephone number by which a first party may access the communication system, at the communication system, receiving a telephone call from the first party by the action of the first party using a telephone to call the telephone number, at the communication system, receiving a request from the first party to establish communications with a second party, identifying an instant communications client associated with the second party, and responsive to the request, acting to establish communications between the first party and the instant communications client using the communication system.

[0029] Another exemplary embodiment of the present invention discloses a computer-readable medium comprising instructions which, when executed by a processor, causes a communication system to perform a method. The method comprising the steps of, from a first party using a telephone device, receiving a request to establish communications with a second party, determining whether instant communications may be established with the second party, and responsive to at least whether instant communications may be established with the second party, establishing communications, comprising instant communications, between the first party and the second party.

[0030] Another exemplary embodiment of the present invention discloses a computer-readable medium comprising instructions which, when executed by a processor, causes a communication system to perform a method. The method comprising the steps of, from a first party, receiving a request to establish communications with a second party using a first mode of communicating, determining, using a presence determination, whether the second party is accessible via a second mode of communicating, and establishing communications between the first party and the second party using at least the second mode of communication responsive to at least whether the second party is accessible via the second mode of communicating.

[0031] Another exemplary embodiment of the present invention discloses a computer-readable medium comprising instructions which, when executed by a processor, causes a communication system to perform a method. The method comprising the steps of, from a first party, receiving a request to establish communications with a second party using a first mode of communication, determining whether the second party is accessible via the first mode of communication, responsive to at least whether the second party is accessible via the first mode of communicating, determining a second mode of communicating with the second party, and establishing communications, comprising the second mode of communication, between the first party and the second party.

[0032] Another exemplary embodiment of the present invention discloses a computer-readable medium comprising instructions which, when executed by a processor, cause a communication system to perform a method. The method comprising the steps of detecting an unanswered telephone call from a first party to a second party, determining whether instant communications may be established with the second party, responsive to at least whether instant communications may be established with the second party, establishing communications, comprising instant communications, between the first party and the second party.

[0033] Still other aspects, features, and advantages of the present invention will be readily apparent from the following detailed description, simply by illustrating a number of particular embodiments and implementations, including the best mode contemplated for carrying out the present invention. The present invention is also capable of other and different embodiments, and its several details can be modified in various obvious respects, all without departing from the spirit and scope of the present invention. Accordingly, the drawing and description are to be regarded as illustrative in nature, and not as restrictive.

BRIEF DESCRIPTION OF THE DRAWINGS

[0034] The present invention is illustrated by way of example, and not by way of limitation, in the figures of the accompanying drawings and in which like reference numerals refer to similar elements and in which:

[0035] **FIG. 1** depicts a communication network in accordance with one embodiment of the present invention;

[0036] **FIGS. 2A and 2B** together depict a call-flow diagram of a presence-based call completion session with calling party termination in accordance with one embodiment of the present invention;

[0037] **FIGS. 3A and 3B** together depict a call-flow diagram of a presence-based call completion session with called party termination in accordance with one embodiment of the present invention;

[0038] **FIGS. 4A and 4B** together depict a call-flow diagram of a presence-based call completion session with calling party re-origination in accordance with one embodiment of the present invention;

[0039] **FIGS. 5A and 5B** together depict a call-flow diagram of a presence-assisted, Voice-over-IP call completion session in accordance with one embodiment of the present invention;

[0040] **FIG. 6** depicts a computer system that can be used to implement an embodiment of the present invention;

[0041] FIGS. **7A-7D** depict a process by which an enhanced services system may offer a caller an option of communicating to a messaging client of a called party in accordance with an exemplary embodiment of the present invention;

[0042] FIGS. **8A-8D** depict a process by which a caller may contact an enhanced services system to establish communications to a messaging client of a called party in accordance with an exemplary embodiment of the present invention; and

[0043] FIGS. **9A-9D** depict a process by which an unanswered call may be handled by an enhanced services system to offer a caller an option of communicating to a messaging client of a called party in accordance with an exemplary embodiment of the present invention.

DETAILED DESCRIPTION OF AN EXEMPLARY EMBODIMENT

[0044] Systems, methods and computer-implemented processes for call processing are described. In the following description, for the purposes of explanation, numerous specific details are set forth in order to provide a thorough understanding of the present invention. It is apparent, however, to one skilled in the art that the present invention may be practiced without these specific details or with an alternative equivalent arrangement. In other instances, well-known structures and devices are shown in block diagram form in order to avoid unnecessarily obscuring the present invention.

[0045] The present invention addresses the need to increase the flexibility and ease with which parties may establish communications. As will now be described using several exemplary embodiments, the present invention

achieves advantages in establishing communications despite the increased use of multiple, and often disparate, modes of communication such as telephony and instant messaging.

[0046] An alternative form of communications popularized in recent years is messaging communications. Messaging communications are generally characterized by a communicating party determining a finite amount of information to be sent as a message. Messaging communications typically involve one or more discrete messages sent by a party to one or more other parties. A message may comprise text, data or digitized audio or video information, for example, or even combinations of these. Electronic mail (e-mail) and text paging are forms of messaging communications.

[0047] In contrast to messaging, other forms of communications, such as telephony, enable a period of essentially continuous (and usually full duplex) two-way conversation between parties in the context of a single session or connection. As in the example of telephony, the parties generally only determine the time duration of the overall session and are not engaged in composing and sending messages of a specific size.

[0048] 'Instant messaging' refers to messaging communications wherein the delays in readying the message for delivery (such as addressing to a recipient), transporting the message, and bringing the message to the attention of the recipient are sufficiently short or imperceptible that parties may communicate in a nearly conversational manner. In the case of a form of instant communications known as 'text chat' sessions, the conversational pace is often limited mainly by the time it takes for chat participants to compose and finalize messages to be transmitted. The acceptable margin of delay in message transmission may be on a different scale than for the end-to-end delay margins in telephone communications, but the objectionable impact of excess delay on perceived fluency of communications is a common detriment to both modes of communication.

[0049] Instant messaging may be considered a type of instant communications. Some popular applications that are commonly used for instant messaging include, for example, America Online (AOL) Instant Messenger™ (hereinafter AIM), Yahoo!® Messenger and MSN® Messenger. The present invention is not limited to embodiments using these specific applications, technologies or services and maybe applied in the context of private or semi-private messaging systems such as a system used within an enterprise, company, or otherwise isolated or segregated user community.

[0050] In one sense, 'instant communications' may refer to a style of communicating wherein the communicating parties experience substantially immediate establishment of communications on a per-message basis. In the context of instant messaging, a selection may be initially made by a first party to open a dialog with a specific second party. Thereafter, the parties may spontaneously generate and send messages without having to address each message or perform other steps preparatory to the sending of each message.

[0051] Furthermore, the term "instant communications" may be applicable in the sense of there being no user-perceivable session establishment as each message is sent, even though each message is in fact sent as a brief burst of information transmission activity through the network. At some level, each transmission burst may be handled as a separate communications session.

[0052] The user does not have to engage in per-message establishment of a session, if applicable, nor is any significant delay perceived by the user arising from automatic session initiation that might be briefly performed at some level through, for example, a TCP/IP connection. In one regard, then, the instancy of instant communications may be viewed as relating to the performance of session initiation and addressing without burdening the user and with sufficiently little delay as to be minimally perceptible or inconsequential to the user.

[0053] Instant communications may also be 'instant' in the sense that, when a message is composed and sent, it is fairly immediately routed to a destination, such as an instant messaging client. As a message is composed and sent, the sending party may be provided with some indication that the destination is ready to receive messages or at least has recently claimed to be open to receiving messages. This forehand knowledge may be provided by presence technology described below. Except for very brief queueing in data buffers in routers and transmission equipment in the course of transmission, the message is not substantially stored anywhere in the network for the purpose of being delivered to the recipient at a later time or at a time determined by the recipient.

[0054] This instantaneous handling of messages may be contrasted to a typical e-mail system, wherein a message is often stored in a repository for a significant time period waiting for the recipient mail client application to poll for new mail items to download from the mail server. An electronic mail message may be stored on an e-mail server for a time duration of less than a minute or for several hours, several days or even indefinitely.

[0055] After polling a mail server and downloading any new messages, an e-mail client typically terminates communication with the mail server until a future time when the mail client again polls the server. The polling may be triggered by a time interval setting or by manual request from a user. Between such polling times, the mail server or service merely stores messages.

[0056] Another characteristic typical of instant communications is immediate presentation of the message content to the receiving party upon arrival of the message. A message received by an instant messaging client is immediately presented, such as in a window in a graphical user interface on a display device, or otherwise made known to the receiving party. The user is not required to take any action to receive or initiate delivery of each message that arrives. Message reception and presentation is automatic and immediate.

[0057] In contrast to electronic mail clients, it is generally unnecessary in instant communications for the user to poll a server either manually or automatically at certain time intervals, nor is the user require to take additional action, as there is with "opening" an e-mail, to have the content displayed. Furthermore, unlike an e-mail 'inbox' stored as a file in a nonvolatile storage device, there is typically no systematic storing of the received message at the receiving end for the purpose of presenting the message to the recipient for the first time at a time substantially later than it was received.

[0058] Instant communications may refer to any communications involving an instant communications client, such as an instant messaging client application running on a computer. An instant communications client may be an imbedded application as embodied in a personal digital assistant (PDA), mobile phone or other portable device. An instant communications client may support instant messaging, such as text-based chat. An instant communications client may also support audio communications having little enough delay to enable interaction among communicating parties in a nearly conversational style. As a mode of communication, instant communications may be contrasted to toll-quality telephony, which provides full-duplex communications with any transmission delay being mostly attributable to propagation (at electronic speeds) and to vocoder signal processing delays. Users of text messaging and voice-enabled instant communications clients in conjunction with data transport networks may experience greater delays or less reliable transport than by a telephony mode of communication. Nevertheless, many users find instant communications to be adequate, more cost effective, and even preferable to more traditional telephony in some circumstances. The 'instant' quality of such communications achieves much more of a real-time interactive nature than paging or e-mail modes of communication.

[0059] An instant communications client may further enhance this communications by including or being coupled with technology that conveys the capabilities, personality, intent or other meaningful characteristics of the communications user. For example conversion of text into speech which reflects age, gender, language, accents, dialects and conversely converting speech into text or graphics that may also represent the same types of attributes.

[0060] In many implementations, instant communication is complemented by "presence" technology—a mechanism through which parties receive timely information about the availability of others to communicate. A presence service acts as an intermediary through which a party may express availability to communicate and may be informed about the availability of other parties. A description of presence technology may be found in document RFC 2778 of the Internet Engineering Task Force (IETF).

[0061] Presence technology facilitates instant messaging and supports the perceived instantaneous nature thereof. Indeed, one of the key motivations for applying presence techniques in the context of instant messaging is that, as described above, there is typically very little storage of messages for later delivery to a recipient. Consequently, it is often useful for a sending party to know, before assembling and sending messages, whether the messages are likely to be received or presented to the recipient in a timely manner. In the experience of the sending party, presence technology can be a factor affecting one's expectation or perception of instancy. To party intending to send a message, presence technology attempts to provide awareness of the availability status of the intended recipient (or at least the readiness state of the recipient's instant communications client) before communications are sent to the recipient. When a sending party does observe or otherwise determine that a recipient is present via presence technology, the party may then confidently send communications and reasonably expect that the transmitting and presenting the message to the recipient will be immediate or nearly instantaneous. Presence differs from, for example, the placing of a collect call in that presence information for a party is is often maintained before the time it is actually needed in the context of someone communicating with party.

[0062] In general, presence technology is intended to provide an up-to-date indication of the presence of other parties. Of course, availability information for a party may be subject to change and to the party's desire to accept communications. The timeliness of availability information may also vary depending on implementation. A prospective sender of communications usually does not need to perform additional actions to ascertain presence of other parties at any point in time, such as immediately before sending a message. Instead, as in many instant messaging client applications, presence state of a group of addressees is constantly updated and indicated on a user interface. This self-updating aspect of some presence implementations further lends to the instancy and spontaneity with which users may initiate and carry on instant communications.

[0063] In the present description, a first party or user originating communications may be referred to as a "caller" or "calling party." Likewise, a second party being sought by the first party may be referred to as a "called party." For convenience, this familiar terminology is borrowed from traditional telephony. However, it should be understood that the present invention is applicable in the context of other communications systems and the use of these terms should not imply that it is constrained to conventional telephony in any way. A telephone network is but one type of communication system wherein enhanced services may be applied to increase the overall usefulness and effectiveness of service provided. It will be appreciated that the principles of the present invention may be usefully applied in other contexts.

[0064] In accordance with an exemplary embodiment, the present invention enables, as an alternative form of communication, the establishment of communications between a caller who is using a telephone and a called party who is using an instant communications client, such as an instant messaging client.

[0065] In accordance with a first exemplary usage scenario, the caller may contact an enhanced services platform by phone and express a desire to reach a particular party. By virtue of various aspects of the present invention, the enhanced services platform is able to offer the caller the option of communicating to the called party via voice communications or textual messaging through the called party's instant communications client. An example of voice communications to an instant communication client is depicted in a commonly owned patent application, U.S. application Ser. No. 09/858,256, which is hereby incorporated by reference in its entirety. In the latter case of textual messaging, speech-to-text and text-to-speech translating processes may be provided so that the caller's speech can be translated into a textual instant message that is sent to the called party and an instant message sent from the called party can be translated into synthesized speech. This function can also be provided by a human operator, creating, in essence, a human relay.

[0066] In accordance with a second exemplary usage scenario, the caller may contact the enhanced services platform by dialing a specific telephone number, such as '1-800-GET-CHAT', to signify the intent to contact a called party's instant communications client in preference to other alternatives that may be available at the time of the call.

[0067] In accordance with a third exemplary usage scenario, the caller may attempt a telephone call to a called party by dialing the called party's telephone number in the traditional manner. Upon recognition by some element of the telephone system or the enhanced services system that the call is busy or is unanswered, the caller may be connected to the enhanced services platform. The enhanced services platform may offer the caller alternative ways of reaching the called party, including textual messaging or voice communications with the instant communications client of the called party as enabled by aspects of the present invention.

[0068] In accordance with an exemplary embodiment of the present invention, presence-determining aspects of instant communications technology are advantageously employed by an enhanced services platform to further improve the usefulness of the service provided. In the course of assisting a calling party seeking to initiate communications with a called party, the enhanced services platform may ascertain the current availability or a "presence state" indicating whether the called party is available to communicate via an instant communications client. In the various usage scenarios described above, the presence information is used by the enhanced services platform to determine, for example, whether to offer instant communications as an alternative to a caller.

[0069] In addition to providing flexibility in how communications are established, it is also desirable to maximize the convenience and usefulness of a commercial communications service by offering a wide variety of payment arrangements. For example, by allowing billing to a credit card or similar impromptu arrangements, a service provider may advantageously accept business even from users who are not subscribers to the service. This allows for casual access by the general public and provides revenue opportunities beyond formal pre-subscribed or prepaid arrangements, while also increasing the effectiveness and usefulness of the publicly available communications system or a private communications system.

[0070] Some aspects of the present invention also advantageously allow for efficiency in the use of 'numbering' (as in telephone networks) or other types of address space resources in a communications system, as well as flexibility in how a called party is specified.

[0071] This consideration of numbering space in telephone networks is of growing importance. Traditional numbering plans applied to telephony, such as the North American Numbering Plan, were initially structured based on geographical location and the need to achieve automatic routing of calls among switches in the early telephone network. More recently, the inevitable exhaust of the all of the available numbers according to this plan has been accelerated by the increase in users requiring multiple telephone numbers and multiple telephone lines. For a given telephone subscriber, these multiple numbers or lines often include both home and business telephones, facsimile machines, wireless phones and separate dial-up modem connections.

[0072] Accordingly, it is advantageous in one aspect to provide a single identifier corresponding to a given user, whereby contact made using the single identifier, such as a single telephone number, provides access to several modes of communications and perhaps several alternative locations at which the user may be reached. For similar reasons, it is further desirable to implement a communications system wherein identifiers other than, or in addition to, a conventionally structured telephone number may be used to specify a desired called party. This measure dramatically increases the 'address space' from which to select identifiers. Where a communications system is accessed directly by human users, it may also be advantageous to employ identifiers that are of a textual or spoken nature, rather than numbers, that are more akin to natural language and are easier to mentally associate with a party.

[0073] Coupled with the issues above, it may be preferable to provide access to an service through a single address, telephone number or other form of identifier that is easy for users to remember and associate with the service. This practice may provide advantages in advertising and encouraging use of the service.

[0074] Finally, the combination of these practices essentially provides for a single number by which a vast number of called parties may be addressed and reached, with the further advantage that the called party addressing used within the system need not correspond to telephone numbers at all. Thus, one may view the teachings of the present invention as advantageously dealing with the telephony-related number exhaust problem in at least two ways.

[0075] In addition to the above measures, it may be desirable to employ a contact number or address such that the very act of the user accessing the service via the specific contact number signifies or implies to the service some aspect of how the user wants to be served. In accordance with a preferred exemplary embodiment of the present invention, the dialing of a predetermined telephone number signifies the caller's preference to initiate messaging communications as a preferred mode over other available modes.

[0076] In some instances, it may be desirable or advantageous to employ a system wherein a single called party may be known by multiple types of identifiers or aliases, perhaps so that parties wishing to reach the called party may employ whichever handle or identifier is most convenient. In a suitable embodiment, a caller may be able to use any of a variety of identifiers, aliases or addresses to specify the party they are trying to contact. Some examples of identifiers for a party include name, street address, telephone number, e-mail address, chat screen name, alias or 'handle', alphanumeric pattern, network address, uniform resource identifier (URI), uniform resource locator (URL), account number, spoken utterance, etc.

[0077] Taking the approach further, it is possible for a party to be associated with multiple aliases even of the same type. This may be useful from the standpoint of the called party being able to independently manage inbound "traffic" from various groups of originators. For example, a user may provide to casual acquaintances one alias for communication while giving close friends and family members a different alias to be used.

[0078] In the context of user aliases, it is particularly noteworthy that, in accordance with a preferred exemplary embodiment of the present invention, a party may be identified using an instant messaging 'screen name' or the like, perhaps in addition to other identifiers such as given name,

telephone number or account number. A caller may specify a desired party by providing a screen name by which the called party is known in an instant messaging system. An enhanced services platform may comprehend the screen name and facilitate contacting the corresponding called party by instant messaging or other means.

[0079] These advantages and desirable features, as well as the exemplary usage scenarios mentioned above, may be realized and demonstrated in the system of **FIG. 1** which will now be described.

Network Overview

[0080] **FIG. 1** is a block diagram of a communications system **100** in which an exemplary embodiment of the present invention can be implemented. As illustrated, a calling party **101** is capable of communicating, such as by a telephone connection, with a voice processing system (VPS) **103** typically by dialing a telephone number using a telephone **102** via telephone network **80** in order to reach a called party telephone **138**. Telephone network **80** may include, for example, the Public Switched Telephone Network (PSTN) to which VPS **103** is interfaced. However, the present invention is not limited to the use of telephones and the Public Switched Telephone Network by the calling party **101**, because the calling party **101** may use other means to connect to the voice processing system, including mobile telephones, internet telephones, packet telephony clients, etc.

[0081] VPS **103** may be an interactive voice processing system that provides operator services, which can be performed manually by a human operator, automatically by interactive voice response (IVR) implemented by computer processing in a telephony server, or by a combination of manual and automatic interaction. Both types of interactive respondent are represented in **FIG. 1** by operator **52**. Typically, a VPS **103** will comprise a plurality of operator stations or 'interactive response stations'. Traditional examples of operator services are directory assistance and operator-assisted call placement. In the course of providing various types of operator services, VPS **103** may elicit information from calling party **101**, furnish confirmation or prompting to calling party **101**, and provide information to calling party **101**. In fulfillment of some services, voice processing system **103** may also control, or at least initiate, the completion of a call from calling party **101** to called party **137**. The call may be completed in accordance with the information provided directly by the calling party **101** or obtained from various databases, such as directories (not shown), accessible to the voice processing system **103** based on information from the calling party **101**.

[0082] In accordance with a typical usage scenario, calling party **101** uses a telephone **102** to establish contact with a called party **137**. In the case of, for example, a collect call, a calling card call or a operator-assisted call, calling party **101** may contact VPS **103** as an intermediary to establish the call. Calling party **101** may know the telephone number of a called party telephone **138** associated with called party **137** and may want to arrange alternate billing through VPS **103** rather than call phone **138** directly. Otherwise, calling party **101** may not know the telephone number of phone **138** and may have operator **52** assist in finding the telephone number. Called party **137** may be accessible via called party client **139** rather than phone **138** and, in accordance with an advantageous aspect of the present invention as will be shown, VPS **103** may assist the calling party **101** in making contact with the called party **137** despite this situation.

[0083] For practical reasons, VPS **103** is often coupled to telephone network **80** through a bridging switch **54**. Bridging switch **54** allows an operator **52** to establish a call among parties in a telephone network and then be removed from the call. Thereafter, the connection among the parties is maintained by the action of bridging switch **54** even after the operator is released. This avoids burdening the VPS resources with having to maintain the connection for the duration of the call. To achieve this advantage, a special type of trunk, known as a release link trunk **55**, is used between bridging switch **54** and VPS **103**. This arrangement using a bridging switch is well-known among those of ordinary skill in the art and is described, for example, in U.S. Pat. No. 5,787,150.

[0084] Bridging switch **54** may be considered to be separate from or integrated with VPS **103**. In practice, bridging switch **54** is often physically separate from VPS **103** yet bridging switch **54** is often owned by or controlled by the entity that owns and controls VPS **103**, so bridging switch **54** may be regarded by some, in a sense, to be part of the service providing system of VPS **103**.

[0085] In accordance with various embodiments of the present invention, information accessible to voice processing system **103** or provided by calling party **101** may include the telephone number associated with called party **137** (that of telephone **138**) or a presence identifier for called party **137**. A presence identifier is a symbolic identifier associated with the party and referring to the party. The presence identifier can be used in querying a server (referred to as a "presence server") or other form of presence-determining process for determining a communications state of the party. The communications state, or "presence state", indicates at least whether or not the party is available to accept delivery of preferably instant communications. Examples of instant communications include instant messages, chat messages, voice-enabled chat, internet relay chat (IRC), voice over Internet Protocol (IP), and any other messages delivered at a rate capable of supporting an interactive session. In contrast to the store-and-forward approach of electronic mail, the delivery of these types of instant communications is substantially immediate, enabling parties to communicate in a nearly conversational style and pace. Accordingly, a presence identifier can include any of a screen name, a handle, an alias, an electronic pseudonym, a logical or physical address of some nature, a chat identifier, and an instant message identifier.

[0086] VPS **103** is coupled, via connection **10**, to an intelligent presence gateway (IPG) **105** for handling the presence-related processing of the call from the calling party **101**. Connection **10** may be implemented as an interface coupling VPS **103** and IPG **105** using a mutually understood protocol. In this manner, VPS **103** and IPG **105** may be manufactured separately yet properly interoperate when connected together in a working installation. As used herein, an 'interface' refers to a coupling through which entities engage in some form of interaction, such as the communicating of information from one to another. From the standpoint of IPG **105**, connection **10** may be indicative of a voice

processing system interface for passing control information. Likewise, with respect to VPS **103**, this interface to IPG **105** may be regarded as a presence interface by which VPS **103** may receive presence information and other control information. Along connection **10**, voice processing system **103** may request and obtain a communications state for called party **137** from IPG **105**. As part of a request, voice processing system **103** may specify a particular called party **137** by using a presence identifier associated with called party **137**, if known, or by using a telephone number or other index adequately specifying called party **137**. Alternatively, voice processing system **103** may obtain a presence identifier for called party **137** from IPG **105** in response to a request specifying the called party **137** by other means, such as by a telephone number.

[**0087**] The intelligent presence gateway **105** can be implemented by a computer system executing one or more processes relating to specific aspects of presence-based call processing. These processes may include a capabilities process **107**, a watcher process **109**, a fetcher process **111**, a sender process **113**, and a receiver process **115**. Although all of these components are labeled and illustrated in **FIG. 1** as separate processes, this separation is merely functional. The present invention is not limited to implementing each of the logical processes as separate physical processes, and the illustrated processes may be combined into one or more larger processes or implemented by threads or other forms of procedural control flows. Each function represented by processes **107** through **115** may also be distributed among multiple instances and multiple physical computing systems in a manner well understood by those of ordinary skill in the art.

[**0088**] As one form of capabilities-determining process, capabilities process **107** can be provided to query a capabilities server **117** for determining what kinds of communications the called party **137**, or more particularly called party client **139**, can handle. Capabilities process **107** may be communicably linked, via connection **20**, to a capabilities server **117** or capabilities process **107** may subsume the function of capabilities server **117**. For example, the capabilities server **117** may be a subscriber database that includes attributes and information such as a previously registered presence identifier for the subscriber and which kinds of communication means the subscriber has for accepting instant messages, voice-enabled chat messages, voiceover-IP communications, and the like. The capabilities server **117** may also store this information in association with the subscriber's telephone number so that the operator services of the voice processing system **103** can obtain the presence identifier of a subscriber based on the telephone number of the called party **137**. Capabilities server **117** may also express preferences on behalf of called party **137**, such as preferred modes of communications that should be attempted before other modes.

[**0089**] Both the watcher process **109** and the fetcher process **111** are configured for obtaining presence information, including the communications state of the called party **137**, from a presence server **119** via connections **22** and **24**. A presence server **119** is preferably implemented as a computer system that furnishes the presence services described in Internet Engineering Task Force (IETF) document RFC-2778 or similar specifications. Examples of publicly or commercially available instant messaging services providing presence functionality include AMERICA ONLINE™, YAHOO™, etc. Alternatively, presence server **119**, instant messaging server **121** and called party client **139** may represent elements of proprietary, private or semi-private messaging systems which, for example, are operated within a business enterprise or organization. Typically, users make their on-line presence known by registering their communication state with the presence server **119**. Specifically, when a user logs in using a messaging client somewhere on the Internet, corporate intranets, or other similar networks, the user effectively registers with the presence server **119** that the user is available, and when the user logs out, the user registers with the presence server **119** that the user is unavailable.

[**0090**] In **FIG. 1**, called party client **139** represents a communications device, such as a computing device running a communications application, wherein a instant communications client of this type may operate. Called party client **139** may be communicably coupled to instant messaging server **121** via connection **32** and may be communicably coupled to presence server **30** via connection **30**.

[**0091**] Connections **30** and **32** may be realized through a data transport network, such as the Internet, and need not be permanent or persistent connections. Connections **30** and **32** may be implemented through network **133**, which may be the public Internet organ intranet or some other form of network.

[**0092**] Fetcher process **111** is configured to query the presence server **119** for the communications state of a specific called party **137** as referenced by a given presence identifier. Accordingly, the fetcher process **111** can be used to obtain the communication state of a called party **137** who may or may not be pre-subscribed to the operator services of the voice processing system **103**. If, for implementation-dependent reasons, it is not desirable to maintain a list of subscribers by the watcher process **109**, the fetcher process **111** can be used to obtain the communication state of the called party **137** as needed, whether or not the intelligent presence gateway **105** or a system accessible to the intelligent presence gateway **105** has prior knowledge of the called party **137**.

[**0093**] As an alternative to fetcher process **111**, which obtains presence information as needed, a watcher process **109** may be used to obtain notifications from presence server **119**. Watcher process **109** may submit a list of presence identifiers of subscribers to the presence server **119**. For example, these subscribers may be pre-subscribed customers of the company that provides the enhanced services, e.g. the company providing the operator services at the voice processing system **103**. After receiving the list of parties of interest to watcher process **109**, presence server **119** notifies watcher process **109** of any changes in communication state for the listed parties. Consequently, the watcher process **109** is able to keep track of the latest communication state of any of the subscribers in the list and be prepared to provide such information to VPS **103**. The watcher process **109** may also poll the presence server **119** for updates to the presence information in the list of presence identifiers.

[**0094**] Instant messaging server **121** is a form of instant messaging server (or service) facilitating messaging communications among parties. The sender process **113** and the receiver process **115** are configured for communicating with

an instant messaging server **121** via connections **26** and **28**, respectively. Specifically, the sender process **113** is configured to transmit messages to the instant messaging server **121**, and the receiver process **115** is configured to receive messages from the instant messaging server **121**. Multiple sender processes **113** and receiver processes **115** may be running on the intelligent presence gateway **105**, each one being spawned for a particular corresponding enhanced services session. With respect to instant messaging server **121**, IPG **105** may be indistinguishable in behavior from other instant messaging participants using the server. Sender process **113**, receiver process **115** and connections **26** and **28** are indicative of an instant messaging interface for IPG **105** or other elements of **FIG. 1**.

[**0095**] Preferably, the instant messaging server **121** may be implemented as a computer system that furnishes the instant message services described in IETF document RFC-**2778** or similar recommendations. Instant messaging server **121** may be private or publicly available and may be commercial or non-commercial. The role of instant messaging server **121** may be fulfilled by popular instant message services supplied by AMERICA ON-LINE™, YAHOO™, etc. As another example, the instant messaging server **121** can be a server that provides Internet Relay Chat (IRC). Preferably, the instant messaging server **121** is capable of both text-based messaging and voice-enabled messaging. Alternatively, in accordance with some implementations of instant messaging, instant messaging server **121** may only be involved in establishing initial contact among conversing parties, with subsequent messaging taking place directly between the parties, such as between called party client **139** and receiver process **115**, without going through server **121**. It is also feasible that the functions of instant messaging server **121** can be implemented by a computer system at the called party client **139** in what may be referred to as a peer-to-peer messaging system.

[**0096**] Both the intelligent presence gateway **105**, via connection **14**, and voice processing system **103**, via connection **12**, are coupled to a billing system **123** for recording service and session events that allow the enhanced services presence-based call completion to be charged on a per-call, per-message, per event, per minute, or other per-unit of time or data basis. Of course, services may also be provided on a subscription basis or at a flat rate, or even billed according to a combination of basic rates and usage-based charges. The billing system **123** may also be used by the voice processing system **103** to ascertain whether there are billing restrictions on the enhanced services, for example, to prevent fraudulent calls or calls using stolen credit cards, or to block certain types of calls such as those originating from a particular number or facility. The telephone network **80**, VoIP Gateway **131**, and IP Network **133** may also be coupled to the billing system **123**.

[**0097**] Another component of the network **100** is an intelligent information translator (IIX) **125**, which can be integrated with the intelligent presence gateway **105** or be implemented on a standalone server. The intelligent information translator **125** is applied for establishing communications among calling party **101** employing voice over telephone **102** and called party **137** who is using textual messaging via called party client **139**. In some embodiments, the functions and components of the voice-over-IP gateway **131** or the voice processing system **103** may be integrated with the intelligent information translator **125**.

[**0098**] Furthermore, the intelligent information translator **125**, in response to interaction with the intelligent presence gateway **105**, initiates and executes a speech-to-text process or thread **127** and a text-to-speech process or thread **129** for translating among speech signals associated with the telephone connection and textual information associated with the instant messaging session.

[**0099**] As used herein, "speech" may, in a broader sense, also include non-spoken audible signals such as tones, signals or sounds which have meaning or significance that is commonly recognized or at least mutually agreed upon among communicating parties. For example, sounds of laughter, musical tones, sound effects, DTMF signals or other familiar audible sounds may communicate information or express thoughts and emotions. Embodiments of the present invention may advantageously include various aspects of recognizing, interpreting, and producing such sounds as a way of enhancing communications among parties. One practical application of this might be allowing a user of the system that generates textual information to interact with a voice processing system that is accustomed to receiving DTMF tones as input.

[**0100**] In the discussion of IIX **125**, "text" may refer to, for example, symbols, characters and representations of visual or tactile elements which may or may not be actual words according to a given written or spoken language. Thus, it should be understood that text-to-speech process **127** and speech-to-text process **129** may operate to convert to/from audible signals other than spoken words and to convert to/from data representing information other than words.

[**0101**] In the context of facilitating communications among one party using an instant communications client and another party using a telephonic connection, a novel aspect of the present teachings relates to the manner in which symbols, known as "emoticons" and often appearing along with textual information, may be used to convey emotions, thoughts or impressions.

[**0102**] Because instant messaging sessions, especially chat sessions, may use a number of conventional abbreviations and so-called "emoticons", the speech-to-text process **129** and text-to-speech process **127** may employ special-purpose dictionaries (not shown) that list the proper equivalents for performing conversion among speech and text or symbols. For example, the commonly used "LOL" may be translated to the spoken equivalent of "laughing out loud" or to a sound effect that sounds like laughter. Dictionaries may be customizable to suit the preferences of communicating parties using system **100**.

[**0103**] IIX**125** may act to recognize sounds and render, in the conversion performed by speech-to-text process **129**, textual or symbolic representations that correspond to the sounds according to some conventional or desired mapping. For example, the spoken words "laugh out loud" or even the detection of sounds of laughter from one party may evoke a textual "LOL" or the like which is conveyed to the other party who is using a textual interface. Further, to aid such detection or provide more deliberate control for communicating parties, IIX **125** may be receptive to verbal commands and command delimiters indicating that a sound or spoken utterance is to be interpreted according to this feature rather than interpreted as literal words. For example, a party may

say "insert" or "emoticon" followed by a desired expression such as "laugh", "frown", "puzzled", etc. Upon recognizing such a keyword, IIX **125** will interpret adjacent sounds and, if possible, map the sounds detected into appropriate symbols to be sent to another party.

[**0104**] In performing conversion, IIX **125** may be receptive to other signals such as DTMF signals. While communicating through IIX **125**, a party using a telephone may be able to press digits on a dialing keypad to have specific emoticons or other symbols included in the textual output of the conversion module. For example, a "smiley face" representation may be sent to an instant communications user in response to a telephony user entering a sequence such as "#8" or "486", the latter of which follows the shape of a smile on a standard 12-key touch-tone keypad. DTMF tones may also be used to implement recognizable command delimiters in the context of the previous discussion.

[**0105**] In the course of converting speech and other audible signals into corresponding symbols or text, IIX **125** may also perform translation among different spoken and written languages, for example, converting English text to Spanish speech and vice-versa. The decision to invoke this type of conversion may be performed dynamically in response to input from the parties as the communications is established. Alternatively, language preferences or compatibilities of one or both of the parties may be known or maintained in a profile database or expressed by devices, such as called party client **139**, to affect how IIX **125** handles the communications. Language conversion may be provided as an option to users and, from a commercial standpoint, may be offered at an additional charge to offset costs or provide a profitable operation for a service provider.

[**0106**] As IIX **125** performs conversion, the manner in which each party perceives the other party may be affected by the interaction through the translator. For example, a male party using an instant communications client, such as called party client **139**, will likely prefer that any synthesized speech representing him to a telephony user be rendered in a male voice. Other aspects of speech rendering, such as approximate speaker age, vocal characteristics, inflection and local dialect may be alterable or configurable and may be adjusted dynamically or according to, for example, a profile maintained for a given user in capabilities server **117**, for example. In some implementations, a party might elect to use a speech persona that is whimsical or that emulates the characteristics of a popular recognizable personality. Users may pay a premium to a service provider for the use of such custom services.

[**0107**] Another aspect of how one party "experiences" another party relates to the identifying of the parties to one another, particularly to the party who is using an instant communications client of some nature. In conducting messaging communications, for example, one party will see chat messages coming from another party, the chat messages having actually been composed by speech-to-text process **129** based upon speech input from the other party. The apparent screen name of the remote party may be subject to control dynamically during the establishing of communications or may be affected by a profile of user preferences consulted by system **10** in the course of providing the communications service. According to various implementations, the presentation of remote user identity to the messaging user may comprise a screen name, an image or iconic representation, a sound bite or other presentable element. The manner in which a given party wants to be presented to a remote party may be the subject of interaction with an operator or interactive service providing system during or preparatory to the establishment of communications involving the parties. A service provider may optionally assess billable charges to one or both of the parties related to the provisioning, use or invocation of some of these presentation features.

[**0108**] IIX **125** may be controlled by or communicably coupled to either or both of VPS **103**, via connection **57**, or IPG **105**, via connection **58**. The types of communications that may take place through these connections are typified in the discussion of **FIG. 2B**. One aspect of control information along connection **57** may relate to whether or not IIX **125** is to engage in communications involving called party client **139**. Other aspects affected by communication along connection **57** may relate to, for example, port numbers by which other elements communicate with translating prcoesses or language models to be used for translation. Alternatively, engagement of IIX **125** may take place intrinsically through commmunications along connections **42**, **44**, **46** or **48**. IIX **125** may comprise a controller **126** for performing control communications, such as along connections **57** and **58**, and generally for coordinating any necessary allocation, configuration or the like pertaining to engaging processes **127**, **129** in communications sessions through IIX **125**.

[**0109**] Responsive to whether the called party will be using textual messaging, IIX **125** may be invoked by coupling text input from receiver process **115** along connection **48** to text-to-speech process **127**, which converts the text input to corresponding speech output and sends the speech output, along connection **44** to ultimately reach calling party **101**. Likewise, speech input received from calling party **101** along connection **42** is converted by speech-to-text process **127** into corresponding text output and passed, along connection **46**, to sender process **113** to ultimately reach called party client **139**.

[**0110**] Connections **42** and **44** may be said to be a "bearer channel interface" referring to the bearing or carrying of user traffic as opposed to signaling and control information. Other elements in **FIG. 1** may be similarly viewed as having bearer channel interfaces. Furthermore, although connections **42** and **44** are shown as coupled to VPS **103**, it is conceivable that the coupling of connections **42** and **44** to calling party **101** may involve one or more of VPS **103**, bridging switch **54** and telephone network **80**. The nature of connections **42** and **44** may vary as well. Depending the degree to which IIX **125** may be integrated with VPS **103**, connections **42** and **44** may be implemented along a data bus or local area network which carries data representing voice signals within VPS **103**.

[**0111**] Otherwise, connections **42** and **44** may resemble standard interfaces such as T1, ISDN PRI, or even analog 2-wire or 4-wire connections. Advantageously, connections **42** and **44** may be assigned to ports on the bridging switch **54** so that calling party **101** may be coupled to IIX **125** without occupying resources of VPS **103**. Speech signals to be translated into textual information may reach IIX **125** in a variety of forms.

[0112] A signaling interface, such as SIP user agent **56**, optionally added to voice processing system **103** is shown to in communication with a voice-over-IP gateway **131** for establishing a voice call over a packet-switching network, such as IP network **133**, using a protocol such as Session Initiation Protocol (SIP) or H.323. The voice-over-IP gateway **131** may also be in communication, directly or through VPS **103** or other elements, with the intelligent information translator **125** for providing the voice input to the speech-to-text process **127** and receiving voice output from the text-to-speech process **129**. Various couplings between voice-over-IP gateway **131** and other elements may be considered a packet voice communications interface with respect to system **100**. Furthermore, where system **100** is taken to include a voice-over-packet gateway or otherwise provide an interface directly to a packet data network, the interface so formed may also be referred to as a packet voice communications interface.

[0113] Those of ordinary skill in the relevant art will recognize that the various functional elements depicted in **FIG. 1** may be combined or separated in a variety of ways while still embodying the teachings of the present invention. For example, VPS **103** and IPG **105** may be separately implemented and merely interfaced to one another. Alternatively, these may be fully integrated in a single element or installation to constitute a device for enabling call completion through real-time messaging communications. Either of these may also include IIX **125** and its functions. Furthermore, a gateway device, such as VoIP gateway **131**, may be integrated with any or all of these elements to form a composite device or system enabling communications among a telephone user and a instant communications client.

[0114] Any of the various possible combinations among elements may be implemented in a platform suitably equipped with telephony interface equipment, communications switches, operator stations, and sufficient computing and digital signal processing resources to provide all the requisite functionality and interfaces described herein. For example, an arrangement suitable for implementing at least VPS **103** and perhaps other elements of system **100** is described in the co-pending U.S. patent application Ser. No. 09/096,938, especially with respect to **FIGS. 1 and 2** therein. Voice processing systems in general are well known in the art and it will be apparent to those of ordinary skill how a variety of existing systems and architectures may be modified in design to embody the present invention.

[0115] In addition to calls carried over a conventional telephone network **80**, system **100** may also involve telephony class and other communications within a packet data network, such as IP (internet protocol) network **133**. An IP telephone **82** is shown coupled to IP network **133** and may be used by a caller to originate a call to VPS **103**. VPS **103** may handle such a call similarly to what has been described for a conventional telephone call inbound from telephone network **80**.

[0116] One technique for coordinating the establishment of telephony calls and other types of communications sessions is called the Session Initiation Protocol (SIP) and is described in documents such as RFC 3261 of the Internet Engineering Task Force (IETF). IP telephone **82** may be a SIP-compliant device. To establish a connection with VPS **103**, IP phone **82** may send a SIP 'INVITE' message to a SIP server **135**, which serves a role in a SIP environment of determining how and where to send further SIP messages to achieve the connection requested from IP phone **82**. Eventually, by the appropriate sequence of SIP messaging as is well known in the art, IP phone **82** may be connected to VPS **103** through a voice-over-packet gateway, such as voice-over-IP (VoIP) gateway **131**. Connection **50** by which IP network **133** is coupled to VoIP gateway **131** may comprise SIP signaling messages over a User Datagram Protocol (UDP) and digitally encoded audio telephony signals sent via the Realtime Transport Protocol (RTP).

[0117] A voice-over-packet gateway, such as VoIP gateway **131**, is well known in the industry as a device for allowing communications among disparate types of networks. In particular, VoIP gateway **131** adapts signaling and bearer channel communications in a telephone network to the types of signaling and packetized data stream communications used in a packet telephony network.

[0118] IP telephone **82** may be connected to VPS **103** through IP network **133** and VoIP gateway **131**. A user of IP phone **82** may experience much the same interaction with operator **52** as calling party **101** or called party **137**.

[0119] A user of IP phone **82** may be able to send and receive voice communications to IIX **125** in order to communicate with called party **137** who is using a textual messaging interface at called party client **139**. In this scenario, the speech communications among the IP phone **82** and the IIX **125** may be carried along connection **38**, which may be a conventional telephone circuit or TDM channel. Alternatively, VoIP gateway **131** may be coupled via connection **36** directly to IIX **125** to facilitate such communications. Any of connections **36**, **38** and **40** may implement a gateway control interface operable to cause VoIP gateway **131** or the like to establish voice communications between a telephone **102** or IP phone **82** and called party client **139**. It is also conceivable that IIX **125** may provide, for example, an interface directly to IP network **133** for directly supporting RTP connectivity. Additionally, any of connections **36**,**38** and **40**, as well as SIP user agent **56**, may implement a network signaling interface operable to coordinate communications between parties in **FIG. 1**. Connections **36**, **38** and **40** may also carry voice communications to and from network **133** and may therefore implement a packet voice communications interface.

[0120] Aside from being involved in the connection of IP phone **82** to VPS **103** just described, IP network **133** may participate in reaching called party client **139** by so-called "voice enabled chat." Upon indication that the called party client **139** supports voice connections and that such a voice connection is indeed desired by the communicating parties, a voice connection may be established from calling party **101**, through VPS **103** or bridging switch **54**, through connection **38**, VoIP gateway **131**, IP network **133** and connection **52** to called party client **139**. The signal through connection **38** may be a conventional analog or TDM telephony signal whereas the latter segments through IP network **133** may be RTP connections through a packet data transport.

[0121] Those of ordinary skill will recognize that many variations are possible in connections among elements, sequencing and flow of control messages, roles fulfilled by elements, inclusion of SIP user agent clients and user agent

server interfaces into elements. For example, VPS **103** may present an interface direct packet transport interface and/or a SIP interface without requiring gateway **131**.

[**0122**] Furthermore, indications of activities or events within various elements of **FIG. 1** may be reported to billing system **123** for purposes such as assessing usage charges to users, monitoring fraud activity or performing traffic engineering. These indications of activities or events may relate to a wide variety of events taking place elements in **FIG. 1** and may be designed to occur at any point in the course of providing a service to one or more parties. Indications to billing system **123** may accompany other communications, such as control communications occurring among elements in **FIG. 1**, and may reach billing system **123** via any number and combination of the connections and elements shown. Indications to billing system **123** may undergo processing, such as combining of related indications, by other elements before being forwarded to billing system **123**. Some or all of the function of billing system **123** may be integrated into or distributed among other elements or functions depicted in **FIG. 123**. Any of the elements may be involved in also using billing system **123** verify whether service activity is to proceed based upon, for example, ability to obtain payment for providing the service.

Call Flows

[**0123**] Various call completion scenarios can occur within the network illustrated in **FIG. 1**. **FIGS. 2A through 5B** are various example call flows depicting how elements of **FIG. 1** may interact to handle a call in various ways. The four call flows are similar in many ways but differ in the following aspects:

[**0124**] **FIGS. 2A and 2B** describe what may occur as a calling party makes contact with VPS **103** and is connected to the called party's instant communications client through IIX **125**. After communicating in this manner for a period of time, the caller eventually disconnects the call.

[**0125**] In **FIGS. 3A and 3B**, the caller is connected to the called party through IIX in much the same way as in **FIGS. 2A and 2B**, but it is the called party who disconnects the call.

[**0126**] In **FIGS. 4A and 4B**, the caller disconnects the call with the called party but stays coupled to VPS **103** in order to "reoriginate" another call perhaps to a different called party.

[**0127**] In **FIGS. 5A and 5B**, the called party elects to use a voice-over-packet capability of their instant communications client to engage in voice communications with the calling party.

[**0128**] These call flows depicting control information and the like being passed among the functional elements of **FIG. 1** are merely examples and are not intended to represent all of the interactions contemplated among these elements.

[**0129**] Calling party **101** may have different call experiences depending on the how calling party reaches VPS **103**, such as what telephone number is dialed by the calling party to reach VPS **103**. Various call experiences are described in detail below in conjunction with **FIGS. 7A through 9D**. The main differences among the call experiences relate to how the calling party invokes call completion to an instant communications client and whether such completion is offered as a primary mode of completion or as a secondary mode of completion. A typical sequence of interactions among elements will now be described in conjunction with **FIGS. 2A and 2B**. This sequence of interactions may be representative of several possible services or usage scenarios and, with minor variations, may be applicable to all of the call experiences that will be further described later.

[**0130**] **FIGS. 2A and 2B** together constitute a call flow illustrating presence-based call completion wherein the call is eventually concluded by the calling party. Each arrow in the call flow of **FIGS. 2A and 2B** represents interaction of some nature between elements of **FIG. 1**. These actions are generally communications among elements which, depending on the circumstances, may include, for example, vocal communications, textual communications, call setup signaling, control signals and event notifications.

[**0131**] In **FIG. 2A**, calling party **101**, via telephone **102**, places a call to, or otherwise becomes connected with, VPS **103**. For example, calling party **101** may dial a number corresponding to a collect call service implemented by VPS **103**. Calling party **101** may access VPS **103** for the purpose of placing a collect call to called party **137**.

[**0132**] The placing of the call to VPS **103** by calling party **101** is represented in **FIG. 2A** by action **201**. Action **202** represents the answering of the call by VPS **103**, or an operator **52** therein (see **FIG. 1**), and may comprise an audible greeting to the caller along with a prompt for the caller to provide input to specify the called party they want to contact.

[**0133**] In action **203**, the caller provides input about the called party they are seeking. In scenarios other than a collect call, such as a prepaid calling card arrangement, action **203** may also entail the caller providing a calling card number and a PIN number or otherwise providing information as to how the call is to be billed.

[**0134**] Action **204** may serve to notify billing system **123** that VPS **103**, or generally system **100**, is being accessed to provide service. Billing system **123** may note this indication as part of its role in assessing charges for usage of the service. These charges may be billed to calling party **101**, to called party **137** or to some other account.

[**0135**] In action **204**, VPS **103** may communicate with billing system **123** to verify the billing information which may have been provided by the caller or obtained by other means such as a database look-up. The billing information may be associated with the called party, the calling party, a third party account or some other account. In the case of a collect call, the billing information of the called party will likely be checked. It is further possible that signaling information accompanying the inbound call or a line information database (LIDB) or profile information database may also be examined at this point to verify the called party's or calling party's ability to participate in collect calls or whatever type of call is being requested.

[**0136**] If billing system **123** performs an authorization role as just described, action **205** may represent the response from billing system **123** indicating to VPS **103** whether or not the call completion or other service requested by calling party **101** may be performed. Assuming this authorization is granted, action **206** is then performed by VPS **103** or an operator **52** therein.

[0137] Action **206** generally represents actions performed by the operator, which may vary depending on what type of call or service has been requested by calling party **101**. In the present example of a collect call, VPS **103** (an operator **52**) may initiate a telephone call to called party **137** in the traditional manner by announcing the call to the called party and asking if the called party will accept the charges for the call. In a particular instance, the called party **137** might not be reached by the operator or may decline the collect call. Action **207** represents the operator informing calling party **101** that the attempted collect call cannot be completed at the present time.

[0138] In accordance with exemplary embodiments of the present invention, the operator may at this point offer calling party **101** the option of attempting to engage in instant communications, such as textual chat, with the called party as an alternative to a telephone conversation. Other alternatives, such as voice mail, may be offered as well.

[0139] Action **208** represents the response of the calling party to the operator's offer to use instant communications. Assuming the calling party agrees to use instant communications, action **208** may be viewed as being essentially another request for service by calling party **101** to VPS **103**.

[0140] To pursue the prospect of connecting calling party **101** with called party **137**, VPS **103** solicits presence information from IPG **105** as represented by action **209**. This request for presence information, as well as the eventual response shown as action **217**, may take place, for example, through connection **10** shown in **FIG. 1**.

[0141] In accordance with one approach described earlier with respect to fetcher process **111**, IPG **105** may request and obtain, in actions **211** and **212** respectively, presence status information for the called party from presence server **119**. In the request to presence server **119**, the called party may be specified by a chat screen name or other identifier by which the called party is known to presence server **119**.

[0142] It should be noted that presence server **119** will usually have maintained a presence state for called party **137** before the time of presence request **211** and often even before the calling party's initial call (action **201**) to VPS **103**. Action **210** represents called party **137**, or more particularly called party client **139**, notifying presence server **119** of its availability state at some point prior to the requesting of presence information in action **211**. This approach will often allow determining availability of called party **137** before contact is actually attempted with called party **137** or called party client **139**.

[0143] As shown in actions **213** and **215**, IPG **105** may also consult capabilities server **117** to obtain information, such as preferences or capabilities pertaining to called party **137** and/or calling party client **139**. For example, capabilities server **117** may return information as to whether called party client **139** supports voice-enabled chat and whether called party **137** generally prefers to use textual or voice communications.

[0144] After obtaining presence information and other information, IPG **105** provides the information in a response to VPS **103** as represented by action **217**. Actions **209** through **217** represent a novel coupling of an interactive voice processing system to a presence-determining function in accordance with preferred embodiments of the present invention.

[0145] At this point VPS **103** may optionally involve billing system **123** as shown in actions **219** and **221**. For example, VPS **103** may determine, perhaps in response to information gleaned in actions **209-217**, whether further service should be performed based on the called party's ability to pay or upon other determinations that may be made in conjunction with billing system **123**.

[0146] In practice, many such factors may be considered in determining whether calling party **101** may ultimately establish communications with called party client **139**. Making this determination may involve, for example, obtaining, from a presence server, presence state information pertaining to the second party, contacting the second party and obtaining an indication from the second party as to the acceptance of instant communications, determining whether the first party is eligible to establish instant communications with the second party, determining whether the second party is eligible to receive instant communications from the first party, and determining whether the first party desires to establish communications with the second party using instant communications. Depending on implementation, various ones of these factors may be applied by billing sytem **123** or by other elements in the course of service processing.

[0147] In action **223**, VPS **103** may inform calling party **101** that called party **137** may be accessible via instant communications. In action **223**, or separately in action **225**, VPS **103** may request confirmation from calling party **101** that they indeed wish to proceed with instant communications with the called party. In action **225** VPS **103** may also solicit the preferences of calling party **101** in terms of whether to use textual chat or voice if supported by the called party client **139**. As part of action **225**, the operator may ask how the calling party **101** prefers to be identified to the called party **137**. The response by calling party **101** to these prompts is shown by action **227**.

[0148] Referring now to **FIG. 2**B, it may be seen that, having determined that the calling party desires chat and that the calling party appears to be capable of engaging in chat, VPS **103** proceeds to contact called party **137** and invite them to converse with calling party **101**. VPS **103**, via IPG **105** and IM server **121** as depicted by actions **229** and **231** and **233**, initiates a dialog with called party **137**, or particularly the called party client **139** being used by called party **137**. In action **229**, VPS **103** may include a message such as "Roger is calling from a phone and would like to chat with you. Can you chat now?"

[0149] Action **233** represents a session initation to establish instant messaging communications with called party **137** and action **235** represents the acceptance of the session. Action **237** is an instant message to received by the calling party containing the aforementioned "Can you chat now?" invitation.

[0150] Called party **137** provides a response to the invitation in action **239** which, through actions **241** and **243**, reaches VPS **103**. At this point, billing system **123** may optionally be informed of the acceptance of called party **137** as evidenced by action **245**. For example, in some implementations, this event may be significant to billing system **123** as representing the commencement of billable usage by the parties.

[0151] As shown by action **247**, billing system **123** may also be involved in authorizing further action to connect the parties. In some scenarios, part of action **245** may include the passing of information obtained from called party **137**, such as billing account information or authorization codes, so that billing system **123** can take such information into account. In action **249**, VPS **103** may inform calling party **101** by voice that they are about to engage in a telephony-to-instant-communications session with the called party. VPS **103** may also convey any instructions about how to participate in the session. Likewise, VPS **103** may also provide a connection notification, action **255**, comprising a textual message telling called party **137** about the impending commencement of the session.

[0152] Optionally, actions **249** and **251** may give rise to corresponding confirmations **253** and **255**. These optional confirmations may be desirable if, for example, charges for the session or other aspects of the connection must be approved by either or both of the parties. Billing related actions **245** and **247** shown earlier may optionally be performed after, and responsive to, these confirmations.

[0153] As shown by action **257**, VPS **103** then requests IPG **105** to establish a session between the parties. This session, between calling party **101** using a telephony connection and called party **137** using an instant communciations client, involves engaging intelligent information translator **125** to perform substantially real-time conversion among speech signals and textual information.

[0154] Accordingly, IPG **105** sends a media channel request, in action **259**, to the intelligent information translator **125**, which allocates the needed resources for a speech-to-text process **127** and a text-to-speech process **129**. This may involve reserving ports, allocating memory, and initiating new processes. The result of this allocation is sent back to the intelligent presence gateway **105** as a media channel response shown as action **261**. This response may include identifiers, port numbers or other information involved in coordinating communications establishment through IIX **125**.

[0155] Upon successful allocation of a media channel, the intelligent information translator **125** connects the calling party **101** to the media channel, enabling voice channel connectivity as represented by action **263**. On the called party end, the intelligent information translator **125** establishes a chat or other instant communications session with the called party **137** via the sender and receiver processes **127**, **129** and the instant messaging server **121**, and binds the instant message session to the media channel. This instant communications connection, represented by action **265**, may be achieved by having IIX **125** take up the same IM session established with the called party **137** in action **231**. In this manner, called party **137** experiences continuity of the one session rather than having to separately establish a session for conversing with the calling party **101**. At this point, calling party **101** and called party **137** are in communication with one another.

[0156] As the conversation proceeds, speech recognition algorithms are applied by the speech-to-text process **127** to convert utterances in the speech of the calling party **101** into a textual or character-based representation that is transmitted to the called party **137** via the sender process **113** and the instant messaging server **121**. Conversely, text messages comprising words, abbreviations, and so-called "emoticons" received from the called party **137** via the instant messaging server **121** and the receiver process **115** are converted into a speech representation of the words by the text-to-speech process **129**. The resulting speech signals may be transmitted to the calling party **101** via the voice-over-IP gateway **131** or through connection **44**, VPS **103**, bridging switch **54** or other means. Speech-to-text process **127** may employ any of the well known speech recognition technologies available from companies such as Nuance, SpeechWorks, IBM, or Dragon Systems, for example. Text-to-speech process **129** may use DECtalk™ speech synthesis technology developed by Digital Equipment Corporation, for example. This translation may also be performed manually by a human operator listening to the utterances via a headset and typing in the text in one direction, and reading the text on a screen and providing a spoken representation in the other direction.

[0157] Communications among the parties proceeds in this manner through IIX **125** until the parties are finished communicating or until a balance of a billable account is exhausted. For example, at some point during the call, the calling party **101** may wish to terminate the call. This may occur by hanging up of the telephone used by the calling party **101**. This action results in a termination request, action **267**, being sent from the calling party **101** to VPS **103**. In practice, this termination request may be conveyed as telephony signaling, for example. In some implementations, VPS **103** may confirm the termination by sending a termination response, action **269**, to the calling party **101**.

[0158] VPS **103** sends termination notification, action **271**, to the called party **137** via the intelligent presence gateway **105** and the instant messaging server **121**. As represented by action **273**, VPS **103** may transmit a service event to billing system **123** as the session is ended. Intelligent presence gateway **105** may also provide a session event, action **275**, to the billing system **123**. Actions **273** and/or **275** may be peformed so that usage activity may accurately reported upon and charges can be accurately calculated.

[0159] As with all of the calls flows in FIGS. **2A-5B**, the sequence of events depicted in **FIGS. 2A and 2B** are intended to be merely illustrative and should not be construed to be the only manner in which the present invention may be embodied. Many of the actions shown may be augmented by other actions, omitted, or performed in a different sequence or among different elements than as shown. For example, VPS **103** could participate in engaging IIX **125** directly rather than having IPG **105** do so. Furthermore, according to an alternative approach, aspects of call termination and billing notifications may be performed by IIX **125**, especially considering that IIX **125** is actively engaged in the session until it is concluded.

[0160] Termination of communications may also occur other than as shown in FIGS. **2A-2B**. For example, the called party **137** may signal termination by ending the instant messaging session or providing some other indication as may be appropriate in a particular implementation. This scenario is shown in **FIGS. 3A and 3B**. In **FIGS. 3A and 3B**, the steps starting from the initial voice call **301** in **FIG. 3A** through the establishment of the voice call **363** and instant message **365** occur as substantially described with respect to steps **201** through **265** hereinabove in **FIGS. 2A and 2B**, with some details ommitted for simplicity. How-

ever, in this called party termination scenario, the called party **137** sends a termination request, action **367**, triggered by the ending of the session, to IIX **125** or, depending on implementation, to the voice processing system **103** via the instant messaging server **121** and the intelligent presence gateway **105**. The voice processing system **103** (or IIX **125**) confirms the termination by sending a termination response, action **369**, to the called party **137** via the intelligent presence gateway **105** and the instant messaging server **121**, and by sending a termination notification **371** to the calling party **101**. As before, the voice processing system **103** transmits a service event **373** to the billing system **123**, and the intelligent presence gateway **105** transmits session event **375** to the billing system **123**.

[0161] **FIGS. 4A and 4B** illustrate a call re-origination scenario, in which the calling party **101** indicates a desire to make another call without hanging up or reentering the billing information, for example by pressing the pound key (#) on a telephone keypad for two (2) seconds. In this scenario, the steps starting from the initial voice call **401** in **FIG. 4A** to the establishment of communications among the parties represented by actions **463** and **465** are substantially as described with respect to steps **201-275** presented above in **FIGS. 2A and 2B**. However, during the 'call', the calling party **101** makes the re-origination request **477** which is detected by VPS **103**, perhaps via bridging switch **54**. In response, the connection to called party **137** is terminated as shown by action **471**, which is optional and may include, for example, a textual notification of the termination for the benefit of called party **137**. Actions **473** and **475** inform billing system **123** of the conclusion of the session. Then the operator at VPS **103** offers new service options as shown by action **479**. The calling party **101** submits a new service option request **481**, which is handled by VPS **103** by taking appropriate steps **483**. If the calling party **101** wishes another instant message based communication, then the steps described herein above may be repeated. The interaction just described for VPS **103** may involve or be performed entirely by IIX **125** as well.

[0162] In another embodiment of the present invention, instant communications is used initially to contact the called party **137** for obtaining billing and capabilities information, but the call is actually then terminated in a voice-over-IP session at the option of the called party **137**.

[0163] **FIGS. 5A and 5B** illustrate the operation of this embodiment, in which steps **501-543** (transmission of the session response **543** from the intelligent presence gateway **105** to the voice processing system **103**) proceed as substantially described with respect to corresponding steps **201-243**. However, operator **52** at voice processing system **103** may detect that the called party client **139** is capable of voice-over-IP based on the information in the capability information response **515**. An alternative to the process of obtaining information from capabilities server **117** may be to query the called party client **139** directly using, for example, SIP mechanisms for exploring client capabilities. In response the operator may send an instant message **545** to the called party **137** via the intelligent presence gateway **105** and the instant messaging server **121**. Instant message **545** may ask the called party to select which capability, voice or text, the called party prefers to use. In reply, the called party **137** returns an instant message **547** that confirms that the voice-over-IP capability of the called party client **139** is to be used. This can happen at any time during the communication session.

[0164] After interaction with the billing system **123** using billing request **549** and billing response **551**, the operator at VPS **103** sends the intelligent presence gateway **105** a session establishment request **553**. In response, the intelligent presence gateway **105** sends a session and channel request **555** to the voice-over-IP gateway **131**, which establishes a voice-over-IP session with the called party client **139**. A session and channel response **557** is then sent from the called party client **139** to the intelligent presence gateway **105**. The intelligent presence gateway **105** then sends a session establishment response **559** to VPS **103**.

[0165] To complete the establishment of the call, VPS **103** provides a connection notification **561** to the calling party **101**, and a connection notification **563** to the called party **137** via the voice-over-IP gateway **131**. In return, the calling party **101** provides a connection confirmation **565** to VPS **103** and the called party **137** provides a connection confirmation **567** to VPS **103** via the voice-over-IP gateway **131**. At this point, the voice-over-IP gateway **131** interfaces a voice call leg **569** with the calling party **101** and a voice-over-IP call leg **571** with the called party client **139**. These requests, responses, notifications, and confirmations may be carried out using computer generated messages or using human-intelligible voice prompts and Dual Tone MultiFrequency (DTMF or "touch tone") or spoken responses.

[0166] Upon conclusion of the call, the call between the calling party **101** and the called party **137** is torn down in steps **573-581** substantially as described herein above with respect to steps **267-275** in **FIG. 2B**.

[0167] In the preceding description of FIGS. **2A-5B**, billing system **123** was shown to participate in collecting information indicative of usage activity in the communcations system and in authorizing activity based on whether such activity could be paid for in some manner. It should be noted that various elements in **FIG. 1** may report a variety of indications to billing system **123** indicating usage of the system which may be billable. The billing system may note these occurrences and determine charges associated with the usage. Furthermore, as depicted in FIGS. **2A-2B** and others, billing system **123** may also participate in authorization or metering of activity in the system based upon whether a valid account exists to which charges may be applied.

[0168] Some types of activity or events in the system relate to invocation of certain actions or features for which charges may be applicable. For example, a calling party (or some other entity to be billed) might be charged for each time they contact the system, each time they use the system to verify presence status for a called party or for each attempt to establish instant communications with a called party. A calling party might also incur fees for having the system map a first identifier, such as a telephone number; to a second identifier, such as an instant messaging screen name.

[0169] A calling party might be charged differently for invocation of textual messaging versus voice communications. A calling party might be charged a fee each time a translator is engaged to enable telephony-to-instant-communications call completion. A calling party may even be charged for requesting information about the balance on an account.

[0170] Other types of activity in the system may relate to quantifying usage of system resources. For example, charges may be applied based upon a time duration of a communications session, a volume of data or traffic handled by the system, or a quantity of translation performed.

[0171] A third possibility for billable activity in the system relates to options and features and subscribed services. Options or features may relate to class of service provided by the system or to customizability. In particular, parties using the system might pay extra to control the translator function in ways such as selecting languages to be used during translation, providing support for 'emoticons' or selecting voice characteristics to properly represent the gender or other characteristics of the party who is using textual messaging, or establishing of common phrases, utterances, or signals including, for example, one or more DTMF signals to signify meaning and therefore enhance communications. Another option that might be billable is automatic notification of balance or charges as a party uses the system. In this third category, it is likely that the billing system mostly serves to authorize activity based upon options selected by the user and/or the status of an account that is to pay for the options.

[0172] Referring now to **FIGS. 7A through 9D**, three processes are shown depicting three different call experiences that might be provided to a calling party by the system of **FIG. 1**.

[0173] It should be noted at the outset that processes **700**, **800** and **900** are merely illustrative and not intended to limit the ways in which the present invention may be realized. Many adaptations and variations are possible. For example, throughout processes **700**, **800** and **900**, the involvement of billing determinations may occur at any juncture in the service processing subject to how one desires to have the system operate. In actual practice, the offering of alternative modes of communication, the soliciting of information from a party and the retrieval of information from databases and such may differ in details and in sequence from what is shown in these examples without affecting the spirit and scope of the present invention.

[0174] Furthermore, at points where these processes may involve determining, for example, preferences of the communicating parties or billing information, such information may be obtained from a database, such as capabilities server **117**, so that user profile information replaces or augments user input. In other words, it is possible for configurable profile information associated with a party to be maintained in a database or the like and to be applied to automating some aspects of how system **100** provides service to calling party **101** and called party **137**. For example, called party **137** may desire to have all inbound calls diverted to called party client **139** during certain times of day. This preference information may reside in capabilities server **117** or elsewhere and may be automatically retrieved and applied in, for example, steps **710** and **714** described below. Called party **137** may have billing information or preferences similarly maintained in a database accessible to system **100** so that any steps requiring billing input are automatically carried out without requiring input from the called party.

[0175] In general, the manner and sequence in which the activities of processes **700**, **800** and **900** may be controlled by profile information associated with parties using system **100**. Service processing may also be affected by coupling to other systems or elements that maintain and use service-affecting profile information. For example, SIP server **135** may maintain profile information relating to called party **137** or called party client **139**. Intelligent presence gateway **105** may coordinate with SIP server **135** so that features such as "Find me-Follow me" implemented in a SIP-controlled environment may be carried out in coordination with other aspects of system **100**.

[0176] In accordance with a first call experience, a calling party reaches the voice processing system **103** by telephone with the original intent of reaching a called party by telephone connection. For example, the calling party may dial "1-800-COLLECT" as they would normally do to use VPS **103** to place a collect call to the called party. The system proceeds to process the collect call as usual. If the call cannot be completed in this manner, then, in accordance with the present teachings, the system investigates the possibility of connecting the calling party to the called party via instant communications. This scenario is described below in conjunction with FIGS. 7A-7D.

[0177] In accordance with a second call experience, the calling party reaches the voice processing system by calling a specific telephone, such as "1-800-GET-CHAT", for the express purpose of initiating instant communications with the called party. This scenario is described below in conjunction with FIGS. 8A-8D.

[0178] In accordance; with a third call experience, the calling party directly calls the called party by telephone in the usual manner. When it is detected that the called party telephone is busy or ringing without being answered, the calling party is connected to the voice processing system so that the caller may be offered alternative ways of reaching the called party.

[0179] In **FIGS. 7A through 7D**, a process **700** is depicted whereby an enhanced services system may offer a caller an option of communicating to an instant communications client of a called party in accordance with an exemplary embodiment of the present invention. Process **700** particularly illustrates a variety of alternatives and conditional steps in accordance with an exemplary embodiment of the present invention.

[0180] Referring to **FIG. 7A**, process **700** commences at step **702** upon a caller calling a voice processing system, such as by calling party **01** contacting an operator **52** or other interactive respondent within voice processing system **103**. Next, in step **704**, the caller specifies to the operator a particular called party that the caller desires to contact. For example, the called party may be specified by name or by phone number, if known. In the case of an automated or semi-automated response system, the caller may provide the called party information via DTMF tones or by other transmission of signals, perhaps even by speaking into a speech recognizing system that can determine the name or number data being conveyed by the caller.

[0181] Proceeding to step **706**, the operator validates the caller's request by, for example, ensuring the caller has expressed a valid telephone number according to the North American Numbering Plan. Of course, the validation may be performed automatically especially if, for example, the telephone number of the called party is input as DTMF tones

or other signals from the caller in step **704**. The validating step **706** may comprise validating the authority of the caller to access specific types of services offered via voice processing system **103**. Validation step **706** may also comprise ensuring that the operator clearly understands what is intended by the caller. Ways of handling inbound calls that fail to be validated are well known or easily foreseen by those of ordinary skill in the relevant art and so are not elaborated upon here.

[**0182**] Assuming that, in step **706**, the caller's request is valid, then process **700** continues at step **708** wherein the operator attempts to reach the called party by telephone, as represented called party phone **138** in **FIG. 1**. Thus far, process **700** is similar to the placement of a collect call. In step **710**, it is determined whether the operator has been successful in establishing contact with the called party or at least with someone who has answered the telephone. If successful contact has been made, then execution proceeds to step **716** to determine if the answering party will accept the call. Typically, in the case of a collect call, the identity of the caller will be announced to the called party and the operator or voice processing system will ask the called party if they will accept the call (along with the charges for the call, if applicable).

[**0183**] If the caller accepts the call in step **716**, then, in step **718**, the caller is connected to the called party and usage-based billing may commence. Once the call is established, the operator is no longer needed on the line and, in practice, the connections, operator(s) and other resources employed within the services platform to initiate the call are released. In **FIG. 1**, for example, bridging switch **54** may typically be used to keep phones **102** and **138** connected, while allowing VPS **103** to disengage via a well-known release link trunk **55** coupling telephone circuits between bridging switch **54** and VPS **103**. (For reference, one may consult U.S. Pat. No. 5,787,150 which shows a bridging switch and describes typical operation of a release link trunk.) Accordingly, then, after establishing the connection among parties in step **718**, process **700** (following label 'D') proceeds to step **770** (**FIG. 7D**) causing the operator to be disengaged from the bridging switch. Process **700** then terminates, having successfully connected the parties and effectively handling the caller's request to contact the called party.

[**0184**] Returning to step **710**, if the operator could not reach the called party by phone, then execution proceeds to step **712** wherein the operator informs the caller that the called party could not be reached by phone. Next, in step **713**, the operator explores whether ther are any other ways that the caller might communicate with the called party, such as by instant messaging or by depositing a voice mail message. The operator's exploration of other possibilities allows the operator to present appropriate options to the caller and may entail checking databases to see if, for example, the caller or called party are subscribed to various service options, such as voicemail, chat call completion, paging, etc., accessible to the operator.

[**0185**] In step **714**, then, based on the operator's findings, a determination is made as to whether a chat session of some sort is a viable alternative by which the caller might communicate with the called party. If instant communications, such as textual chat, is a viable alternative, then process **700** continues to step **720** (**FIG. 7B**) and other steps to attempt to establish communications between the parties through an instant communications mechanism.

[**0186**] Specifically, in step **720**, it is determined whether the operator already has access to information by which to contact the party through instant communications, such as by a chat interface. For example, it is conceivable that the operator may have access to a database mapping telephone numbers or personal names to "screen names" used to identify parties in an instant messaging system. On the other hand, the operator may not have such information and may have to solicit input from the caller. Thus, in step **720**, if the operator does not have access to sufficient information to reach the called party by instant messaging, then step **722** is performed wherein the operator makes known to the caller that alternatives, such as chat, may be available and the operator asks the caller for contact information, if known. In step **724**, if the caller wants to attempt a chat session as an alternative then execution proceeds to step **726**, wherein the caller provides contact information by which the operator may attempt to reach the called party by chat or instant messaging. In step **728**, the operator uses the contact information obtained in step **726** to then determine if the called party is presently available through a chat system. Referring to **FIG. 1**, this action might be represented by VPS **103** requesting presence information from watcher process **109** or fetcher process **111** over connection **10**. As a called party logs onto client **137**, client **137** may register its presence with presence server **119**, making the communications status of client **137** available to watcher process **109** or fetcher process **111**.

[**0187**] If, in step **728**, it is determined that the called party is not present or unavailable through a chat session, then, in step **730**, the operator informs the caller that the called party is not accessible by chat and execution proceeds, via the connector labeled 'C', to step **760** to possibly provide other alternatives as will be described in greater detail below.

[**0188**] Likewise, if, in step **724**, it is determined that the caller does not want to try a chat session, then execution also proceeds to step **760** as described below.

[**0189**] Otherwise, if in step **728**, it is determined that the called party is present and available via chat, then execution proceeds, following the connector labeled 'B', to step **740** of **FIG. 7C** to attempt a chat session with the called party as will be described shortly.

[**0190**] Returning to step **720**, if the operator does have chat information for the called party without need of receiving same from the caller, then execution moves to step **732** to determine if the called party is present, using a similar manner to that described in step **728**. If the called party is not present, then optionally, in step **733**, the operator informs the caller that the party is inaccessible by chat. Thereafter, execution proceeds, following the connector labeled 'C' to step **760** to possibly provide other alternatives as will be described in greater detail below.

[**0191**] Otherwise, in step **732**, if the party is available, then in step **734**, the operator offers the caller the option of engaging in chat communications with the called party. In step **736**, if the caller declines to use the chat alternative, then execution proceeds, following the connector labeled 'C', to step **760** to possibly provide other alternatives as will be described in greater detail below.

[0192] If, on the other hand, the caller does elect to try a chat session in step **736**, then process **700** continues, following along the connector labeled 'B', to step **740** of **FIG. 7C** to attempt a chat session with the called party.

[0193] In **FIG. 7**C, process **700** continues with attempting to establish a chat session between the caller and the called party. At step **740**, coming from either steps **728** or **736**, the operator performs a preparatory step in obtaining information from the caller as to how they wish to be announced to the called party. In step **742**, the operator contacts the called party (or "callee") and invites the callee to participate in a chat session with the caller. In this invitation, the operator introduces the caller using the announcement information obtained in step **740**.

[0194] In step **744**, the called party's response to the invitation is determined and if the invitation is declined, then execution proceeds, following the connector labeled 'C', to step **760** to possibly provide other alternatives as will be described in greater detail below.

[0195] Otherwise, if the called party accepts the chat invitation in step **744**, then step **746** is executed to determine if the called party client supports voice communications (voice-enabled chat). This may be determined by retrieving profile information from, for example, the capabilities server **117** or by directly querying the called party **137** or called party client **139**. If so, then execution proceeds to step **750** wherein the operator asks the called party if they would prefer to engage in voice chat or use text-based chat. In step **752**, the called party responds by electing either text or voice. If the callee selects a textual session, then execution proceeds with step **748** wherein a text chat session is established between the parties through a voice/text translator (see translator **125**) and billing for the session, if applicable, is initiated. Step **748** is also undertaken if the called party client is found to not support voice sessions in step **746**.

[0196] Returning to step **752**, if the callee elects to engage in voice communications through a voice-enabled chat session, then, in step **754**, the parties are connected to carry on voice communications. Referring to **FIG. 1**, this may be represented by connecting the calling party phone **101** through voice processing system **103** or bridging switch **54** to VoIP gateway **131**. This connection is completed by an RTP data connection through IP network **133** to called party client **139**. This connection may be established by SIP signaling among SIP user agent **56**, VoIP gateway **131** and SIP server **135**, or by using H.323-type protocols or other suitable mechanisms.

[0197] Whether a voice connection as in step **754** or a textual chat session as in step **748** ensues, execution then proceeds, along the connector labeled 'D', to step **770** wherein the operator is disengaged from the "call" and then the handling of the caller's original request is concluded in step **772**.

[0198] Referring to **FIG. 7**D, many determinations in process **700** may result in execution of step **760**, generally when attempts to establish telephone or chat messaging to a party have been unsuccessful. In step **760**, it is determined if there are yet other alternatives for communicating to the called party, such as paging or voice mail. If not, then in step **768**, the caller is informed that the called party is not reachable by any further means beyond what may have already been offered to the caller. Processing then proceeds to step **770** to decouple the caller from the operator which, in this instance, essentially disconnects the caller.

[0199] If the condition tested in step **760** is found to be true, then, in step **762**, such alternatives indicated as available in step **760** are offered to the caller by !he operator. In step **764**, it is determined whether the caller elects to use an alternative so offered. If so, then step **766** is performed wherein the caller is 'connected' in a sense to the alternative, meaning that the caller may be forwarded to a voice mail system or become coupled to a paging application, to name a few examples. Returning to step **764**, if the caller elects not to use offered alternatives, then processing continues at step **770** to essentially disconnect the operator from the caller.

[0200] FIGS. **8**A-**8**D depict a process **800** whereby a caller may contact an enhanced services system to establish communications to a messaging client of a called party in accordance with an exemplary embodiment of the present invention.

[0201] In **FIG. 8**A, process **800** commences in step **802** when a caller contacts a voice processing system for the purpose of establishing a chat session with a "called party." In contrast to the scenario described in process **700** wherein the party initially desired to establish a telephone call, process **800** relates to the caller preferring at the outset to establish a chat session with the called party. The caller might place a telephone call to a "1-800-GET-CHAT" telephone number, for example, to signify to the communications system the intent or desire to preferably establish communications via the instant communications client. Where the VPS **103** supports both process **700** and process **800**, the number dialed by the caller to reach the system, or the trunk group by which the call comes to the system, may be used to differentiate handling of the call. The communications system may accordingly, act first to establish contact via a instant communications client in preference to other forms of communication that may be available.

[0202] Upon the caller reaching the system in step **802**, an operator, either manual or automatic or a combination thereof, is connected to the caller and, in step **804**, obtains information from the caller about the party they are trying to reach by chat. The operator may also collect other information such as account information to which the use of the system may be billed. In step **806**, the operator validates at least the contact information provided by the caller and then verifies whether the party is present on a messaging system and determines capabilities for the destination party. Referring to **FIG. 1**, operator **52** may cause VPS **103** to obtain timely presence information from fetcher process **111** or watcher process **109** representing the available status of called party client **139**.

[0203] In step **808**, it is determined, based on the inquiry of step **806**, whether or not the called party is present via a chat messaging client. If presence is not detected, then process **800** continues with step **816** wherein the operator informs the caller that the called party is not accessible, at least not by chat. Thereafter, process **800** continues, following the connector labeled 'A', to step **820** to offer the caller the option of placing a telephone call, as will be described in greater detail below.

[0204] Returning to step **808**, if it is determined that the called party is present and available via chat messaging, then process **800** continues with step **810** wherein the operator obtains information proceeds to establish a chat session between the caller and the called party. In step **810**, the operator performs a preparatory step in obtaining information from the caller as to how they wish to be announced to the called party. In step **812**, the operator contacts the called party (or "callee") and invites the callee to participate in a chat session with the caller. In this invitation, the operator introduces the caller using the announcement information obtained in step **810**.

[0205] Then, in step **814**, the operator determines whether the callee accepts the offered chat communications. If not, then step **816** is performed wherein the operator informs the caller that the called party is not accessible, at least not by chat. Thereafter, process **800** continues, following the connector labeled 'A', to step **820** to offer the caller the option of placing a telephone call as will be described in greater detail below.

[0206] Returning to step **814**, if the caller does accept the invitation to communicate with the caller via chat, then process **800** continues, following the connector labeled 'B', to step **840** (**FIG. 8C**) to initiate the chat session.

[0207] Referring to **FIG. 8**C, step **840** involves the operator determining whether or not the called party messaging client supports voice communications. If not, then a textual chat session is the only option for communicating with the called party and process **800** continues at step **850** wherein the operator or the service provider system verifies how the ensuing chat session will be billed, if applicable. As with other types of services, billing arrangements may include such arrangements as subscription, collect calling, prepaid calling, third-party pays, billing to credit card, etc.

[0208] Once any necessary billing arrangements are made in step **850**, then, in step **852**, the operator causes the parties to be connected together through a two-way voice/text translator and billing, if applicable, is initiated. This connection may be achieved in a manner described earlier in conjunction with **FIG. 1** and **FIG. 2B**. After connecting in step **852**, then process **800** proceeds, following the connector labeled 'D' to disengage the operator from the call in step **870**. In this scenario, the VPS **103** may remain connected to the bridging switch and provide pass through to IIX **125**. Alternatively, IIX **125** may be assigned some ports on the bridging switch and once the connection is made, the operator of VPS **103** may be released from the call.

[0209] Returning to step **840**, if the callee's messaging client is found to support voice communications, then process **800** continues execution with step **842** wherein the operator asks the callee to select a voice-enabled chat session or a textual chat session.

[0210] In step **844**, the callee's selection is determined and affects whether a voice session is established or textual chat session is established, the latter via steps **850** and **852** as already described. If the callee selects voice-enabled chat in step **844**, then process **800** proceeds with step **846** to secure any necessary billing arrangements and then step **848** to establish the voice chat connection. Referring to **FIG. 1**, this connection may involve, for example, one or more of VPS **103**, bridging switch **54**, VoIP gateway **131** and IP network **133**. After making the connection, process **800** proceeds, following the connector labeled 'D', to disengage the operator from the call in step **870**.

[0211] Referring now to **FIG. 8**B, steps **820** through **832** relate to offering the caller an option of placing a telephone call to the called party in lieu of the chat session the caller originally desired. This option may be available to some types of service providers who offer telephony services or have business arrangements through telephone service providers.

[0212] In step **820**, the operator offers the caller the option of trying to reach the called party by telephone, responsive to the previous attempt to chat with the called party having been unsuccessful.

[0213] In step **822**, the caller's preference for a telephone call is determined. If the caller declines to try a telephone connection with the called party, then process **800** proceeds, following the connector labeled 'C', to explore other alternatives by which the caller might be able to communicate with the called party.

[0214] Otherwise, if, in step **822**, the caller elects to try reaching the called party by phone, then, in step **824**, the operator obtains information as to how the call is to be billed and then places the call to the called party.

[0215] In step **826**, a determination is made as to whether or not the callee answers the phone and accepts any applicable charges, such as in a collect call scenario. If the called party, answers and otherwise accepts the call, then steps **832**, **870** and **872** are performed to connect the call and begin billing, if applicable, disconnect the operator from the call and conclude the processing of process **800** in fulfillment of the caller's request.

[0216] Returning to step **826**, if the called party does not answer, or answers and declines the call from the operator, then in step **830**, the operator informs the caller that the callee is unavailable by phone. Thereafter, process **800** proceeds, following the connector labeled 'C', to explore other alternatives by which the caller might be able to communicate with the called party.

[0217] With reference now to **FIG. 8**D, steps **860** through **866** relate to determining if yet other alternatives may be offered to the caller for communicating with the called party. Such alternatives might include voice mail, paging, e-mail transcription, etc.

[0218] In step **860**, the operator examines other such possibilities based on communications alternatives available to the operator through system **103** or based upon services for which the parties may be configured or subscribed. If no alternatives are available then, in step **868**, the called party is declared unreachable and the operator will likely notify the caller that no further options remain. The session between caller and operator will then terminate, at least by the action of step **870**, and then process **800** is concluded in step **872**.

[0219] If at least one alternative is found available in step **860**, then in step **862**, the operator offers such alternative(s) to the caller. In step **864**, if the caller elects an alternative, then the operator connects the caller to, or otherwise invokes, the alternative in step **866**. In the caller declines any remaining alternatives presented in step **862**, then the deci-

sion step **864**, bypasses step **866** and proceeds directly to terminate the call, perhaps after a "bye" from the operator. Once the caller's selection is made in step **864** and any appropriate alternative is invoked, then the operator is disconnected from the caller in step **870** and then process **800** is concluded in step **872**.

[**0220**] FIGS. **9**A-**9**D describe a process **900** whereby a caller places a telephone call directly to a desired called party and, when the call goes unanswered or is otherwise configured to receive alternative processing, the call is diverted to a voice processing system to offer the caller messaging and other alternatives by which to reach the same called party.

[**0221**] Process **900** begins with step **902** upon the system detecting or receiving indication that a telephone call has gone unanswered. It is also conceivable that another system, such as telephone network **80**, may detect the unanswered call and merely redirect the call to VPS **103**. Methods by which a system may detect or be informed of a 'no answer' event are known in the industry. This is evidenced among local exchange carriers in the United States, such as Qwest Communications International, Inc., who perform a feature whereby, when a telephone goes unanswered after several rings, an automated voice prompt bridges onto the line and offers, for a fee, to continue trying to reach the called party and to ring the caller's telephone when the called party eventually answers. In the present discussion, an unanswered phone may be due to a so-called "ring—no answer" event or a "line is busy" event. A telephone caller may also encounter a disconnected line, an "all circuits busy" condition or other problems preventing the call from being completed. In any case, process **900** continues with step **904** wherein the call is diverted to an operator within the service provider system. In step **906**, the operator greets the caller and offers to assist in reaching the party by other means, such as by a chat session. In step **907**, the operator explores available alternatives, based on communications alternatives available to the operator through system **103** or based upon services for which the parties may be configured or subscribed.

[**0222**] In step **908**, it is determined whether, according to information gleaned in step **907**, chat messaging is a viable possibility for reaching the called party. Chat messaging may be impermissible, for example, if the system requires either or both of the caller and called party to be subscribed users of such service and neither of them are subscribed. If chat is not an option, then process **900** continues, following the connector labeled 'C', to step **960** of **FIG. 9D** to pursue other possible communications options.

[**0223**] If the system requires either or both of the caller and called party to be subscribed users of such service and neither of them are subscribed. If chat is not an option, then process **900** continues, following the connector labeled 'C', to step **960** of **FIG. 9D** to pursue other possible communications options.

[**0224**] Otherwise, if, in step **908**, chat messaging is seemingly viable, then process **900** continues, following the connector labeled 'A', to step **920** to attempt to establish a chat session with the called party.

[**0225**] The remainder of process **900** as depicted in **FIGS. 9B, 9C** and **9**D is essentially identical to corresponding steps depicted in **FIGS. 7B, 7C** and **8**D, respectively.

[**0226**] As will be readily apparent to persons of ordinary skill in the relevant art, any of the functional elements, systems and processes depicted in **FIGS. 1 through 9**D may be implemented in various ways using, for example, suitably equipped data processing systems or computing environments. Such implementations may comprise hardware, firmware, software, or combinations thereof, to accomplish intended functions in accordance with the teachings of the present invention. For example, any or all of voice processing system **103**, billing system **123**, intelligent information translator **125** and intelligent presence gateway **105**, or functional subsystems depicted therein, may be implemented as processes in a program-controlled computing environment. Processes depicted in **FIGS. 2A through 9D** may be implemented wholly or partially as processing threads occurring within a computer processor under software and/or firmware control. A given process may be implemented in a distributed fashion among multiple physical processors or multiple logical processing threads. A single processor may participate in implementing multiple instances or multiple types of the processes shown. Any of the functions shown, or the hardware used to implement these functions, may be distributed among remote locations or may be collocated.

[**0227**] It will also be appreciated that connectivity among elements for carrying control signals, telephony-style signaling, bearer channel signals and messaging traffic and the like, may be accomplished via communications through a network or a shared bus or shared memory resources or by inter-process communications.

[**0228**] Even signals representing telephone audio signals may be conveyed to processing equipment in the form of data through a bus or network. Methods and devices for converting among analog audio signals and digital data are well known and are not explicitly shown in **FIG. 1**, although it is common that telephone network **80** or VPS **103** are equipped to perform these conversions. Adaptation to external systems, such as the PSTN as represented by telephone network **80**, may be accomplished by the use of well-known computer-telephony adapter cards (as those made by Dialogic Communications Corporation), commercially available automatic call distributors (ACDs) and Private Branch Exchange (PBX) equipment.

[**0229**] An exemplary arrangement of computing hardware suitable for implementing functional elements and processes in accordance with the present invention will now be described in conjunction with **FIG. 6**, although it should be understood that aspects of the present invention may be embodied in other ways.

Hardware Overview

[**0230**] **FIG. 6** illustrates a computer system **600** upon which an embodiment according to the present invention can be implemented. The computer system **600** includes a bus **601** or other communication mechanism for communicating information and a processor **603** coupled to the bus **601** for processing information. The computer system **600** also includes main memory **605**, such as a random access memory (RAM) or other dynamic storage device, coupled to the bus **601** for storing information and instructions to be executed by the processor **603**. Main memory **605** can also be used for storing temporary variables or other intermediate

information during execution of instructions by the processor **603**. The computer system **600** may further include a read only memory (ROM) **607** or other static storage device coupled to the bus **601** for storing static information and instructions for the processor **603**. A storage device **609**, such as a magnetic disk or optical disk, is coupled to the bus **601** for persistently storing information and instructions.

[**0231**] The computer system **600** may be coupled via the bus **601** to a display **611**, such as a cathode ray tube (CRT), liquid crystal display, active matrix display, or plasma display, for displaying information to a computer user. An input device **613**, such as a keyboard including alphanumeric and other keys, is coupled to the bus **601** for communicating information and command selections to the processor **603**. Another type of user input device is a cursor control **615**, such as a mouse, a trackball, or cursor direction keys, for communicating direction information and command selections to the processor **603** and for controlling cursor movement on the display **611**.

[**0232**] According to one embodiment of the invention, call processing is provided by the computer system **600** in response to the processor **603** executing an arrangement of instructions contained in main memory **605**. Such instructions can be read into main memory **605** from another computer-readable medium, such as the storage device **609**. Execution of the arrangement of instructions contained in main memory **605** causes the processor **603** to perform the process steps in accordance with any or all of the processes described or implied herein. One or more processors in a multi-processing arrangement may also be employed to execute the instructions contained in main memory **605**. In alternative embodiments, hard-wired circuitry may be used in place of or in combination with software instructions to implement the embodiment of the present invention. Thus, embodiments of the present invention are not limited to any specific combination of hardware circuitry and software.

[**0233**] The computer system **600** also includes a communication interface **617** coupled to bus **601**. The communication interface **617** provides a two-way data communication coupling to a network link **619** connected to a local network **621**. For example, the communication interface **617** may be a digital subscriber line (DSL) card or modem, an integrated services digital network (ISDN) card, a cable modem, a telephone modem, or any other communication interface to provide a data communication connection to a corresponding type of communication line. As another example, communication interface **617** may be a local area network (LAN) card (e.g. for Ethernet™ or an Asynchronous Transfer Model (ATM) network) to provide a data communication connection to a compatible LAN. Wireless links can also be implemented. In any such implementation, communication interface **617** sends and receives electrical, electromagnetic, or optical signals that carry digital data streams representing various types of information. Further, the communication interface **617** can include peripheral interface devices, such as a Universal Serial Bus (USB) interface, a PCMCIA (Personal Computer Memory Card International Association) interface, etc. Although a single communication interface **617** is depicted in **FIG. 6**, multiple communication interfaces can also be employed.

[**0234**] The network link **619** typically provides data communication through one or more networks to other data devices. For example, the network link **619** may provide a connection through local network **621** to a host computer **623**, which has connectivity to a network **625** (e.g. a wide area network (WAN) or the global packet data communication network now commonly referred to as the "Internet") or to data equipment operated by a service provider. The local network **621** and the network **625** both use electrical, electromagnetic, or optical signals to convey information and instructions. The signals through the various networks and the signals on the network link **619** and through the communication interface **617**, which communicate digital data with the computer system **600**, are exemplary forms of carrier waves bearing the information and instructions.

[**0235**] The computer system **600** can send messages and receive data, including program code, through the network(s), the network link **619**, and the communication interface **617**. In the Internet example, a server (not shown) might transmit requested code belonging to an application program for implementing an embodiment of the present invention through the network **625**, the local network **621** and the communication interface **617**. The processor **603** may execute the transmitted code while being received and/or store the code in the storage device **609**, or other non-volatile storage for later execution. In this manner, the computer system **600** may obtain application code in the form of a carrier wave.

[**0236**] The term "computer-readable medium" as used herein refers to any medium that participates in providing instructions to the processor **605** for execution. Such a medium may take many forms, including but not limited to non-volatile media, volatile media, and transmission media. Non-volatile media include, for example, optical or magnetic disks, such as the storage device **609**. Volatile media include dynamic memory, such as main memory **605**. Transmission media include coaxial cables, copper wire, and fiber optics, including the wires that comprise the bus **601**. Transmission media can also take the form of acoustic, optical, or electromagnetic waves, such as those generated during radio frequency (RF) and infrared (IR) data communications. Common forms of computer-readable media include, for example, a floppy disk, a flexible disk, hard disk, magnetic tape, any other magnetic medium, a CD-ROM, CDRW, DVD, any other optical medium, punch cards, paper tape, optical mark sheets, any other physical medium with patterns of holes or other optically recognizable indicia, a RAM, a PROM, and EPROM, a FLASH-EPROM, any other memory chip or cartridge, a carrier wave, or any other medium from which a computer can read.

[**0237**] Various forms of computer-readable media may be involved in providing instructions to a processor for execution. For example, the instructions for carrying out at least part of the present invention may initially be borne on a magnetic disk of a remote computer. In such a scenario, the remote computer loads the instructions into main memory and sends the instructions over a telephone line using a modem. A modem of a local computer system receives the data on the telephone line and uses an infrared transmitter to convert the data to an infrared signal and transmit the

infrared signal to a portable computing device, such as a personal digital assistant (PDA) or a laptop. An infrared detector on the portable computing device receives the information and instructions borne by the infrared signal and places the data on a bus. The bus conveys the data to main memory, from which a processor retrieves and executes the instructions. The instructions received by main memory can optionally be stored on storage device either before or after execution by processor.

[0238] For example, although aspects of the present invention have been described with respect to computer systems executing software that directs the functions of the present invention, it should be understood that present invention may alternatively be implemented as a program product for use with a data processing system. Programs defining the functions of the present invention can be delivered to a data processing system via a variety of signal-bearing media, which include, without limitation, non-rewritable storage media (e.g., CD-ROM), rewritable storage media (e.g., a floppy diskette or hard disk drive), and communication media, such as digital and analog networks. It should be understood, therefore, that such signal-bearing media, when carrying or encoding computer readable instructions that direct the functions of the present invention, represent alternative embodiments of the present invention.

[0239] While the present invention has been described in connection with a number of embodiments and implementations, the present invention is not so limited but covers various obvious modifications and equivalent arrangements, which fall within the purview of the appended claims.

What is claimed is:

1. In a communication system, a method of establishing communication among parties coupled to the communication system comprising the steps of:

from a first party using a telephone device, receiving a request to establish communications with a second party;

determining whether instant communications may be established with the second party; and

responsive to at least whether instant communications may be established with the second party, establishing communications, comprising instant communications, between the first party and the second party.

2. The method of claim 1 further comprising:

indicating, to a billing system, activity pertaining to the establishing communications between the first party and the second party.

3. The method of claim 1 further comprising:

determining billable usage of the system related to usage of the communication system by at least one of the first party and the second party.

4. The method of claim 3 further comprising:

determining whether payment can be obtained for usage charges pertaining to the billable usage; and

selectively performing the establishing communications between the first party and the second party responsive at least to whether payment can be obtained for the usage charges.

5. The method of claim 1 wherein said determining whether instant communications may be established with the second party includes at least one of: obtaining presence state information pertaining to the second party, contacting the second party and obtaining an indication from the second party as to the acceptance of instant communications, determining whether the first party is eligible to establish instant communications with the second party, determining whether the second party is eligible to receive instant communications from the first party, and determining whether the first party desires to establish communications with the second party using instant communications.

6. The method of claim 1 further comprising the steps of determining whether the first party desires to establish communications with the second party using instant communications and, responsive to at least such determination, indicating to the second party whether communications with the second party involving instant communications is available.

7. The method of claim 1 further comprising the step of:

engaging an intelligent information translator comprising at least one of:

a text-to-speech translator acting to receive textual information input from the second party, translate the textual information input into corresponding audio information output, and provide the corresponding audio information output to the first party; and

a speech-to-text translator acting to receive audio information input from the first party, translate the audio information input into corresponding textual information output, and provide the corresponding textual information output to the second party.

8. The method of claim 7 further comprising:

indicating, to a billing system, activity pertaining to the engaging the intelligent information translator.

9. The method of claim 7 further comprising:

determining whether an instant communications client used by the second party supports text messaging; and

conditionally performing said engaging the intelligent information translator responsive to at least whether an instant communications client used by the second party supports text messaging.

10. The method of claim 9 further comprising the steps of:

determining whether the second party desires to use text messaging; and

conditionally performing said engaging the intelligent information translator responsive at least to whether the second party desires to use text messaging.

11. The method of claim 10 wherein said determining whether the second party desires to use text messaging comprises receiving indication from the second party as to whether the second party desires to use text messaging.

12. The method of claim 10 wherein said determining whether the second party desires to use text messaging comprises accessing profile information in a database, indicating at least whether the second party desires to use text messaging and the profile information being associated with at least one of the second party and the instant communications client being used by the second party.

13. The method of claim 9 further comprising the steps of:

determining whether the instant communications client supports more than one type of communications; and

conditionally performing said determining whether the second party desires to use text messaging responsive to at least whether the instant communications client support more than one type of communications.

14. The method of claim 13 wherein said determining whether the instant communications client supports more than one type of communication comprises receiving indication from the second party via the instant communications client as to whether the instant communications client supports more than one type of communication.

15. The method of claim 13 wherein said determining whether the instant communications client supports more than one type of communication comprises accessing profile information in a database, the profile information indicating at least whether the instant communications client supports more than one type of communication and the profile information being associated with at least one of the second party and the instant communications client.

16. The method of claim 1 wherein said determining whether instant communications may be established with the second party comprises:

determining a presence identifier associated with the second party;

obtaining presence state information pertaining to the second party, the presence identifier being used to specify the second party to the presence server; and

determining whether instant communications may be established with the second party responsive based at least upon a presence state for the second party as indicated by the presence state information.

17. The method of claim 12 further comprising:

indicating, to a billing system, activity pertaining to the obtaining presence state information.

18. The method of claim 16 wherein the presence identifier is any one of a screen name, a logical address, a physical address, an electronic pseudonym, an alias, a chat identifier and an instant messaging identifier.

19. The method of claim 16 wherein said determining the a presence identifier comprises:

prompting the calling party for the presence identifier; and

receiving the presence identifier over the telephone call.

20. The method of claim 16 wherein said determining the a presence identifier includes:

obtaining identifying information associated with the second party including at least one of a telephone number, an alias, an email address, a given name and a personal identification number;

querying a database to obtain the presence identifier based on the identifying information.

21. The method of claim 20 further comprising:

indicating, to a billing system, activity pertaining to the obtaining the presence identifier based on the identifying information.

22. In a communication system, a method of establishing communication among parties coupled to the communication system comprising the steps of:

from a first party, receiving a request to establish communications with a second party using a first mode of communicating;

determining, using a presence determination, whether the second party is accessible via a second mode of communicating; and

establishing communications between the first party and the second party using at least the second mode of communication responsive to at least whether the second party is accessible via the second mode of communicating.

23. The method of claim 22 further comprising:

indicating, to a billing system, activity pertaining to the establishing communications between the first party and the second party.

24. The method of claim 22 further comprising determining whether the second party is accessible via the first mode of communicating and wherein the establishing the communications is selectively performed responsive to at least whether the second party is accessible using the first mode of communications.

25. The method of claim 22 further comprising the steps of:

indicating to the first party whether the second party is accessible via the second mode of communicating; and

receiving indication from first party as to whether the second mode of communicating is acceptable to the first party;

wherein the establishing communications is responsive to the indication from the first party as to whether the second mode of communicating is acceptable.

26. The method of claim 22 wherein the first mode of communicating is a telephone connection and the second mode of communicating is a textual instant messaging session.

27. The method of claim 16 wherein the first mode of communicating is a telephone connection and the second mode of communicating is a voice-enabled chat session.

28. In a communication system, a method of establishing communication among parties coupled to the communication system comprising the steps of:

from a first party, receiving a request to establish communications with a second party using a first mode of communication;

determining whether the second party is accessible via the first mode of communication;

responsive to at least whether the second party is accessible via the first mode of communicating, determining a second mode of communicating with the second party; and

establishing communications, comprising the second mode of communication, between the first party and the second party.

29. The method of claim 28 further comprising:

indicating, to a billing system, activity pertaining to the establishing communications between the first party and the second party.

30. The method of claim 28 further comprising:

determining billable usage of the system related to usage of the communication system by at least one of the first party and the second party.

31. The method of claim 30 further comprising:

determining whether payment can be obtained for usage charges pertaining to the billable usage; and

selectively performing the establishing communications between the first party and the second party responsive at least to whether payment can be obtained for the usage charges.

32. The method of claim 28 wherein said determining whether the second party is accessible via the first mode of communication includes at least one of: obtaining presence state information pertaining to the second party, contacting the second party and obtaining an indication from the second party as to the acceptance of communications via the first mode of communication, determining whether the first party is eligible to establish communications with the second party via the first mode of communication, determining whether the second party is eligible to receive communications from the first party via the first mode of communication.

33. The method of claim 28 further comprising the steps of:

determining whether the first party desires to establish communications with the second party using the second mode of communication; and

responsive to at least whether the first party desires to establish communications with the second party using the second mode of communication, conditionally performing said establishing communications, comprising the second mode of communication, between the first party and the second party.

34. The method of claim 28 wherein said determining whether the second party is accessible comprises attempting to contact the second party through a instant communications session.

35. The method of claim 28 wherein said first mode of communication is an instant communications session.

36. The method of claim 35 wherein the second mode of communication is a telephone connection.

37. The method of claim 28 further comprising the step of:

engaging an intelligent information translator comprising at least one of:

a text-to-speech translator acting to receive textual information input from the second party, translate the textual information input into corresponding audio information output, and provide the corresponding audio information output to the first party; and

a speech-to-text translator acting to receive audio information input from the first party, translate the audio information input into corresponding textual information output, and provide the corresponding textual information output to the second party.

38. The method of claim 37 further comprising:

indicating, to a billing system, activity pertaining to the engaging the intelligent information translator.

39. The method of claim 37 further comprising:

determining whether an instant communications client used by the second party supports text messaging; and

conditionally performing said engaging the intelligent information translator responsive to at least whether an instant communications client used by the second party supports text messaging.

40. The method of claim 39 further comprising the steps of:

determining whether the second party desires to use text messaging; and

conditionally performing said engaging the intelligent information translator responsive at least to whether the second party desires to use text messaging.

41. The method of claim 40 wherein said determining whether the second party desires to use text messaging comprises receiving indication from the second party as to whether the second party desires to use text messaging.

42. The method of claim 40 wherein said determining whether the second party desires to use text messaging comprises accessing profile information in a database, the profile information indicating at least whether the second party desires to use text messaging and the profile information being associated with at least one of the second party and the instant communications client being used by the second party.

43. The method of claim 40 further comprising the steps of:

determining whether the instant communications client supports more than one type of communications; and

conditionally performing said determining whether the second party desires to use text messaging responsive to at least whether the instant communications client support more than one type of communications.

44. The method of claim 40 wherein said determining whether the instant communications client supports more than one type of communication comprises receiving indication from the second party via the instant communications client as to whether the instant communications client supports more than one type of communication.

45. The method of claim 43 wherein said determining whether the instant communications client supports more than one type of communication comprises accessing profile information in a database, the profile information indicating at least whether the instant communications client supports more than one type of communication and the profile information being associated with at least one of the second party and the instant communications client being used by the second party.

46. The method of claim 28 wherein said determining whether instant communications may be established with the second party comprises:

determining a presence identifier associated with the second party;

obtaining presence state information pertaining to the second party, the presence identifier being used to specify the second party to the presence server; and

determining whether instant communications may be established with the second party responsive based at least upon a presence state for the second party as indicated by the presence state information.

47. The method of claim 28 wherein the presence identifier comprises at least one of: a screen name, a logical address, a physical address, an alias, an electronic pseudonym, a chat identifier and an instant messaging identifier.

48. The method of claim 28 wherein said determining the a presence identifier comprises:

prompting the calling party for the presence identifier; and

receiving the presence identifier over the telephone call.

49. The method of claim 28 wherein said determining the a presence identifier includes:

obtaining identifying information associated with the second party including at least one of a telephone number, an email address, a given name and a personal identification number;

querying a database to obtain the presence identifier based on the identifying information.

50. The method of claim 49 further comprising:

indicating, to a billing system, activity pertaining to the obtaining the presence identifier based on the identifying information.

51. In a communication system, a method of establishing communication among parties coupled to the communication system comprising the steps of:

detecting a telephone call from a first party to a second party;

determining that the telephone call will not be answered by a telephone device to which the call has been placed;

determining whether instant communications may be established with the second party; and

responsive to at least whether instant communications may be established with the second party, establishing communications, comprising instant communications, between the first party and the second party.

52. The method of claim 51 wherein the determining that the telephone call will not be answered by the telephone device comprises at least one of:

determining whether the telephone device is ringing without being answered;

determining whether a telephone line associated with the telephone device is busy;

determining whether a telephone facility associated with the telephone device is busy;

determining whether service to the telephone device is disconnected;

determining whether a service feature causes the telephone call to be redirected; and

determining whether a service feature blocks completion of the telephone call to the telephone device.

53. The method of claim 51 further comprising:

indicating, to a billing system, activity pertaining to the establishing communications between the first party and the second party.

54. The method of claim 51 further comprising:

determining billable usage of the system related to usage of the communication system by at least one of the first party and the second party.

55. The method of claim 54 further comprising:

determining whether payment can be obtained for usage charges pertaining to the billable usage; and

selectively performing the establishing communications between the first party and the second party responsive at least to whether payment can be obtained for the usage charges.

56. The method of claim 51 further comprising:

connecting the telephone call from the first party to a voice processing system;

via the voice processing system, receiving indication from the first party as to whether instant communications with the second party is desired by the first party; and

conditionally performing said establishing communications responsive to at least whether instant communications with the second party is desired by the first party.

57. The method of claim 51 further comprising:

connecting the telephone call from the first party to a voice processing system; and

via the voice processing system, informing the first party of whether instant communications may be established with the second party.

58. The method of claim 57 further comprising:

via the voice processing system, receiving indication from the first party as to whether instant communications with the second party is desired by the first party; and

conditionally performing said establishing communications responsive to at least whether instant communications with the second party is desired by the first party.

59. The method of claim 51 wherein said determining whether instant communications may be established with the second party includes at least one of: obtaining presence state information pertaining to the second party, contacting the second party and obtaining an indication from the second party as to the acceptance of instant communications, determining whether the first party is eligible to establish instant communications with the second party, determining whether the second party is eligible to receive instant communications from the first party, and determining whether the first party desires to establish communications with the second party using instant communications.

60. The method of claim 51 wherein determining whether instant communications may be established with the second party comprises attempting to contact the second party through a instant communications session.

61. The method of claim 51 further comprising the step of:

engaging an intelligent information translator comprising at least one of:

a text-to-speech translator acting to receive textual information input from the second party, translate the textual information input into corresponding audio information output, and provide the corresponding audio information output to the first party; and

a speech-to-text translator acting to receive audio information input from the first party, translate the audio information input into corresponding textual information output, and provide the corresponding textual information output to the second party.

62. The method of claim 61 further comprising:

indicating, to a billing system, activity pertaining to the engaging the intelligent information translator.

63. The method of claim 61 further comprising:

determining whether an instant communications client used by the second party supports text messaging; and

conditionally performing said engaging the intelligent information translator responsive to at least whether an instant communications client used by the second party supports text messaging.

64. The method of claim 63 further comprising the steps of:

determining whether the second party desires to use text messaging; and

conditionally performing said engaging the intelligent information translator responsive to at least whether the second party desires to use text messaging.

65. The method of claim 64 wherein said determining whether the second party desires to use text messaging comprises receiving indication from the second party as to whether the second party desires to use text messaging.

66. The method of claim 64 wherein said determining whether the second party desires to use text messaging comprises accessing profile information in a database, the profile information indicating at least whether the second party desires to use text messaging and the profile information being associated with at least one of the second party and the instant communications client being used by the second party.

67. The method of claim 63 further comprising the steps of:

determining whether the instant communications client supports more than one type of communications; and

conditionally performing said determining whether the second party desires to use text messaging responsive to at least whether the instant communications client support more than one type of communications.

68. The method of claim 67 wherein said determining whether the instant communications client supports more than one type of communication comprises receiving indication from the second party via the instant communications client as to at least whether the instant communications client supports more than one type of communication.

69. The method of claim 67 wherein said determining whether the instant communications client supports more than one type of communication comprises accessing profile information in a database, the profile information indicating at least whether the instant communications client supports more than one type of communication and the profile information being associated with at least one of the second party and the instant communications client being used by the second party.

70. The method of claim 51 wherein said determining whether instant communications may be established with the second party comprises:

determining a presence identifier associated with the second party;

obtaining presence state information pertaining to the second party, the presence identifier being used to specify the second party to the presence server; and

determining whether instant communications may be established with the second party responsive at least to a presence state for the second party as indicated by the presence state information.

71. The method of claim 70 wherein the presence, identifier is any one of a screen name, a logical address, a physical address, an electronic pseudonym, a chat identifier and an instant messaging identifier.

72. The method of claim 70 wherein said determining a presence identifier comprises:

prompting the calling party for the presence identifier; and

receiving the presence identifier via the telephone call.

73. The method of claim 70 wherein said determining a presence identifier includes:

obtaining identifying information associated with the second party including at least one of a telephone number, an email address, a given name and a personal identification number;

querying a database to obtain the presence identifier based on the identifying information.

74. The method of claim 73 further comprising:

indicating, to a billing system, activity pertaining to the obtaining the presence identifier based on the identifying information.

75. A method for establishing communications among parties comprising the steps of:

providing a communication system acting to establish communications among telephones and instant communications clients;

making available a telephone number by which a first party may access the communication system;

at the communication system, receiving a telephone call from the first party by the action of the first party using a telephone to call the telephone number;

at the communication system, receiving a request from the first party to establish communications with a second party;

identifying an instant communications client associated with the second party; and

responsive to the request, acting to establish communications between the first party and the instant communications client using the communication system.

76. The method of claim 75 further comprising:

indicating, to a billing system, activity pertaining to the establishing communications between the first party and the second party.

77. The method of claim 75 further comprising:

determining billable usage of the system related to usage of the communication system by at least one of the first party and the second party.

78. The method of claim 77 further comprising:

determining whether payment can be obtained for usage charges pertaining to the billable usage; and

selectively performing the establishing communications between the first party and the second party responsive at least to whether payment can be obtained for the usage charges.

79. The method of claim 75 wherein the calling of the telephone number by the first party signifies to the communication system the intent of the first party to preferably establish communications via the instant communications client associated with the second party.

80. The method of claim 79 wherein the communication system acts to effect an alternative form of communication between the first party and the second party and wherein the communication system, responsive at least to said calling of the telephone number by the first party, acts to establish communications via the instant communications client associated with the second party in preference to establishing communications via the alternative form of communication.

81. The method of claim 80 further comprising:

indicating, to a billing system, activity pertaining to the preferentially establishing communications between the first party and the second party via the instant communications client.

82. The method of claim 75 wherein the communications via the instant-communications client comprises text messaging.

83. The method of claim 75 wherein the communications via the instant communications client comprises voice-enabled chat.

84. The method of claim 75 wherein the communications via the instant communications client comprises Internet Relay Chat.

85. The method of client **75** further comprising:

responsive to the request, providing an intelligent information translator comprising at least one of:

a text-to-speech translator acting to receive textual information input from the second party, translate the textual information input into corresponding audio information output, and provide the corresponding audio information output to the first party; and

a speech-to-text translator acting to receive audio information input from the first party, translate the audio information input into corresponding textual information output, and provide the corresponding textual information output to the second party.

86. The method of claim 85 further comprising:

indicating, to a billing system, activity pertaining to the providing the intelligent information translator.

87. A computer-readable medium comprising instructions which, when executed by a processor, causes a communication system to perform a method comprising the steps of:

from a first party using a telephone device, receiving a request to establish communications with a second party;

determining whether instant communications may be established with the second party; and

responsive to at least whether instant communications may be established with the second party, establishing communications, comprising instant communications, between the first party and the second party.

88. The computer-readable medium of claim 87 wherein the method further comprises:

indicating, to a billing system, activity pertaining to the establishing communications between the first party and the second party.

89. The computer-readable medium of claim 87 wherein the method further comprises:

determining billable usage of the system related to usage of the communication system by at least one of the first party and the second party.

90. The computer-readable medium of claim 89 wherein the method further comprises:

determining whether payment can be obtained for usage charges pertaining to the billable usage; and

selectively performing the establishing communications between the first party and the second party responsive at least to whether payment can be obtained for the usage charges.

91. The computer-readable medium of claim 87 wherein said determining whether instant communications may be established with the second party includes at least one of: obtaining presence state information pertaining to the second party, contacting the second party and obtaining an indication from the second party as to the acceptance of instant communications, determining whether the first party is eligible to establish instant communications with the second party, determining whether the second party is eligible to receive instant communications from the first party, and determining whether the first party desires to establish communications with the second party using instant communications.

92. The computer-readable medium of claim 87 comprising instructions which, when executed by the processor, causes the communication system to perform a method comprising the steps of:

determining whether the first party desires to establish communications with the second party using instant communications; and

responsive to at least such determination, indicating to the second party whether communications with the second party involving instant communications is available.

93. The computer-readable medium of claim 87 comprising instructions which, when executed by the processor, causes the communication system to perform at least the step of engaging an intelligent information translator comprising at least one of:

a text-to-speech translator acting to receive textual information input from the second party, translate the textual information input into corresponding audio information output, and provide the corresponding audio information output to the first party; and

a speech-to-text translator acting to receive audio information input from the first party, translate the audio information input into corresponding textual information output, and provide the corresponding textual information output to the second party.

94. The computer-readable medium of claim 72 wherein the method further comprises:

indicating, to a billing system, activity pertaining to the engaging the intelligent information translator.

95. The computer-readable medium of claim 87 comprising instructions which, when executed by the processor, causes the communication system to perform a method comprising the steps of:

determining whether an instant communications client used by the second party supports text messaging; and

conditionally performing said engaging the intelligent information translator responsive to at least whether an instant communications client used by the second party supports text messaging.

96. The computer-readable medium of claim 87 comprising instructions which, when executed by the processor, causes the communication system to perform a method comprising the steps of:

determining whether the second party desires to use text messaging; and

conditionally performing said engaging the intelligent information translator responsive at least to whether the second party desires to use text messaging.

97. The computer-readable medium of claim 96 wherein said determining whether the second party desires to use text messaging comprises receiving indication from the second party as to whether the second party desires to use text messaging.

98. The computer-readable medium of claim 96 wherein said determining whether the second party desires to use text messaging comprises accessing profile information in a database, indicating at least whether the second party desires to use text messaging and the profile information being associated with at least one of the second party and the instant communications client being used by the second party.

99. The computer-readable medium of claim 87 comprising instructions which, when executed by the processor, causes the communication system to perform a method comprising the steps of:

determining whether the instant communications client supports more than one type of communications; and

conditionally performing said determining whether the second party desires to use text messaging responsive to at least whether the instant communications client support more than one type of communications.

100. The computer-readable medium of claim 87 wherein said determining whether the instant communications client supports more than one type of communication comprises receiving indication from the second party via the instant communications client as to whether the instant communications client supports more than one type of communication.

101. The computer-readable medium of claim 99 wherein said determining whether the instant communications client supports more than one type of communication comprises accessing profile information in a database, the profile information indicating at least whether the instant communications client supports more than one type of communication and the profile information being associated with at least one of the second party and the instant communications client.

102. The computer-readable medium of claim 87 wherein said determining whether instant communications may be established with the second party comprises:

determining a presence identifier associated with the second party;

obtaining presence state information pertaining to the second party, the presence identifier being used to specify the second party to the presence server; and

determining whether instant communications may be established with the second party responsive based at least upon a presence state for the second party as indicated by the presence state information.

103. The computer-readable medium of claim 102 wherein the method further comprises:

indicating, to a billing system, activity pertaining to the obtaining presence state information.

104. The computer-readable medium of claim 102 wherein the presence identifier is any one of a screen name, a logical address, an electronic pseudonym, a chat identifier and an instant messaging identifier.

105. The computer-readable medium of claim 102 wherein said determining the a presence identifier comprises:

prompting the calling party for the presence identifier; and

receiving the presence identifier over the telephone call.

106. The computer-readable medium of claim 102 wherein said determining the a presence identifier includes:

obtaining identifying information associated with the second party including at least one of a telephone number, an email address, a given name and a personal identification number;

querying a database to obtain the presence identifier based on the identifying information.

107. The computer-readable medium of claim 106 wherein the method further comprises:

indicating, to a billing system, activity pertaining to the obtaining the presence identifier based on the identifying information.

108. A computer-readable medium comprising instructions which, when executed by a processor, causes a communication system to perform a method comprising the steps of:

from a first party, receiving a request to establish communications with a second party using a first mode of communicating;

determining, using a presence determination, whether the second party is accessible via a second mode of communicating; and

establishing communications between the first party and the second party using at least the second mode of communication responsive to at least whether the second party is accessible via the second mode of communicating.

109. The computer-readable medium of claim 108 wherein the method further comprises:

indicating, to a billing system, activity pertaining to the establishing communications between the first party and the second party.

110. The computer-readable medium of claim 108 comprising instructions which, when executed by a processor, causes the communication system to perform at least the step of:

determining whether the second party is accessible via the first mode of communicating and wherein the establishing the communications is responsive to at least whether the second party is accessible using the first mode of communications.

111. The computer-readable medium of claim 108 comprising instructions which, when executed by a processor, causes the communication system to perform a method comprising the steps of:

indicating to the first party whether the second party is accessible via the second mode of communicating; and

receiving indication from first party as to whether the second mode of communicating is acceptable to the first party, wherein the establishing communications is responsive to the indication from the first party as to whether the second mode of communicating is acceptable.

112. The computer-readable medium of claim 108 wherein the first means of communicating is a telephone connection and the second means of communicating is a textual instant messaging session.

113. The computer-readable medium of claim 108 wherein the first means of communicating is a telephone connection and the second means of communicating is a voice-enabled chat session.

114. A computer-readable medium comprising instructions which, when executed by a processor, causes a communication system to perform a method comprising the steps of:

from a first party, receiving a request to establish communications with a second party using a first mode of communication;

determining whether the second party is accessible via the first mode of communication;

responsive to at least whether the second party is accessible via the first mode of communicating, determining a second mode of communicating with the second party; and

establishing communications, comprising the second mode of communication, between the first party and the second party.

115. The computer-readable medium of claim 114 wherein the method further comprises:

indicating, to a billing system, activity pertaining to the establishing communications between the first party and the second party.

116. The computer-readable medium of claim 114 wherein the method further comprises:

determining billable usage of the system related to usage of the communication system by at least one of the first party and the second party.

117. The computer-readable medium of claim 116 wherein the method further comprises:

determining whether payment can be obtained for usage charges pertaining to the billable usage; and

selectively performing the establishing communications between the first party and the second party responsive at least to whether payment can be obtained for the usage charges.

118. The computer-readable medium of claim 114 wherein said determining whether the second party is accessible via the first mode of communication includes at least one of: obtaining presence state information pertaining to the second party, contacting the second party and obtaining an indication from the second party as to the acceptance of communications via the first mode of communication, determining whether the first party is eligible to establish communications with the second party via the first mode of communication, determining whether the second party is eligible to receive communications from the first party via the first mode of communication.

119. The computer-readable medium of claim 114 comprising instructions which, when executed by a processor, causes the communication system to perform a method comprising the steps of:

determining whether the first party desires to establish communications with the second party using the second mode of communication; and

responsive to at least whether the first party desires to establish communications with the second party using the second mode of communication, conditionally performing said establishing communications, comprising the second mode of communication, between the first party and the second party.

120. The computer-readable medium of claim 114 wherein said determining whether the second party is accessible comprises attempting to contact the second party through a instant communications session.

121. The computer-readable medium of claim 114 wherein said first mode of communication is a instant communications session.

122. The computer-readable medium of claim 121 wherein the second mode of communication is a telephone connection.

123. The computer-readable medium of claim 114 comprising instructions which, when executed by a processor, causes the communication system to perform a method comprising the steps of:

a text-to-speech translator acting to receive textual information input from the second party, translate the textual information input into corresponding audio information output, and provide the corresponding audio information output to the first party; and

a speech-to-text translator acting to receive audio information input from the first party, translate the audio information input into corresponding textual information output, and provide the corresponding textual information output to the second party.

124. The computer-readable medium of claim 123 wherein the method further comprises:

indicating, to a billing system, activity pertaining to the engaging the intelligent information translator.

125. The computer-readable medium of claim 114 comprising instructions which, when executed by a processor, causes the communication system to perform a method comprising the steps of:

determining whether an instant communications client used by the second party supports text messaging; and

conditionally performing said engaging the intelligent information translator responsive to at least whether an instant communications client used by the second party supports text messaging.

126. The computer-readable medium of claim 114 comprising instructions which, when executed by a processor, causes the communication system to perform a method comprising the steps of:

determining whether the second party desires to use text messaging; and

conditionally performing said engaging the intelligent information translator responsive at least to whether the second party desires to use text messaging.

127. The computer-readable medium of claim 126 wherein said determining whether the second party desires to use text messaging comprises receiving indication from the second party as to whether the second party desires to use text messaging.

128. The computer-readable medium of claim 126 wherein said determining whether the second party desires to use text messaging comprises accessing profile information in a database, the profile information indicating at least whether the second party desires to use text messaging and the profile information being associated with at least one of the second party and the instant communications client being used by the second party.

129. The computer-readable medium of claim 114 comprising instructions which, when executed by a processor, causes the communication system to perform a method comprising the steps of:

determining whether the instant communications client supports more than one type of communications; and

conditionally performing said determining whether the second party desires to use text messaging responsive to at least whether the instant communications client support more than one type of communications.

130. The computer-readable medium of claim 126 wherein said determining whether the instant communications client supports more than one type of communication comprises receiving indication from the second party via the instant communications client as to whether the instant communications client supports more than one type of communication.

131. The computer-readable medium of claim 129 wherein said determining whether the instant communications client supports more than one type of communication comprises accessing profile information in a database, the profile information indicating at least whether the instant communications client supports more than one type of communication and the profile information being associated with at least one of the second party and the instant communications client being used by the second party.

132. The computer-readable medium of claim 114 wherein said determining whether instant communications may be established with the second party comprises:

determining a presence identifier associated with the second party;

obtaining presence state information pertaining to the second party, the presence identifier being used to specify the second party to the presence server; and

determining whether instant communications may be established with the second party responsive based at least upon a presence state for the second party as indicated by the presence state information.

133. The computer-readable medium of claim 114 wherein the presence identifier is any one of a screen name, a logical address, an electronic pseudonym, a chat identifier and an instant messaging identifier.

134. The computer-readable medium of claim 114 wherein said determining the a presence identifier comprises:

prompting the calling party for the presence identifier; and

receiving the presence identifier over the telephone call.

135. The computer-readable medium of claim 114 wherein said determining the a presence identifier includes:

obtaining identifying information associated with the second party including at least one of a telephone number, an email address, a given name and a personal identification number;

querying a database to obtain the presence identifier based on the identifying information.

136. The computer-readable medium of claim 135 wherein the method further comprises:

indicating, to a billing system, activity pertaining to the obtaining the presence identifier based on the identifying information.

137. A computer-readable medium comprising instructions which, when executed by a processor, causes a communication system to perform a method comprising the steps of:

detecting an unanswered telephone call from a first party to a second party;

determining whether instant communications may be established with the second party;

responsive to at least whether instant communications may be established with the second party, establishing communications, comprising instant communications, between the first party and the second party.

138. The computer-readable medium of claim 107 wherein the method further comprises:

indicating, to a billing system, activity pertaining to the establishing communications between the first party and the second party.

139. The computer-readable medium of claim 107 wherein the method further comprises:

determining billable usage of the system related to usage of the communication system by at least one of the first party and the second party.

140. The computer-readable medium of claim 107 wherein the method further comprises:

determining whether payment can be obtained for usage charges pertaining to the billable usage; and

selectively performing the establishing communications between the first party and the second party responsive at least to whether payment can be obtained for the usage charges.

141. The computer-readable medium of claim 137 comprising instructions which, when executed by a processor, causes the communication system to perform a method comprising the steps of:

connecting the telephone call from the first party to a voice processing system;

via the voice processing system, receiving indication from the first party as to whether instant communications with the second party is desired by the first party; and

conditionally performing said establishing communications responsive to at least whether instant communications with the second party is desired by the first party.

142. The computer-readable medium of claim 137 comprising instructions which, when executed by a processor, causes the communication system to perform a method comprising the steps of:

connecting the telephone call from the first party to a voice processing system;

via the voice processing system, informing the first party of whether instant communications may be established with the second party.

143. The computer-readable medium of claim 142 comprising instructions which, when executed by a processor, causes the communication system to perform a method comprising the steps of:

via the voice processing system, receiving indication from the first party as to whether instant communications with the second party is desired by the first party; and

conditionally performing said establishing communications responsive to at least whether instant communications with the second party is desired by the first party.

144. The computer-readable medium of claim 137 wherein said determining whether instant communications may be established with the second party includes at least one of: obtaining presence state information pertaining to the second party, contacting the second party and obtaining an indication from the second party as to the acceptance of instant communications, determining whether the first party is eligible to establish instant communications with the second party, determining whether the second party is eligible to receive instant communications from the first party, and determining whether the first party desires to establish communications with the second party using instant communications.

145. The computer-readable medium of claim 137 wherein determining whether instant communications may be established with the second party comprises attempting to contact the second party through a instant communications session.

146. The computer-readable medium of claim 137 comprising instructions which, when executed by a processor, causes the communication system to perform a method comprising the steps of:

engaging an intelligent information translator comprising at least one of:

a text-to-speech translator acting to receive textual information input from the second party, translate the textual information input into corresponding audio information output, and provide the corresponding audio information output to the first party; and

a speech-to-text translator acting to receive audio information input from the first party, translate the audio information input into corresponding textual information output, and provide the corresponding textual information output to the second party.

147. The computer-readable medium of claim 146 wherein the method further comprises:

indicating, to a billing system, activity pertaining to the engaging the intelligent information translator.

148. The computer-readable medium of claim 146 comprising instructions which, when executed by a processor, causes the communication system to perform a method comprising the steps of:

determining whether an instant communications client used by the second party supports text messaging; and

conditionally performing said engaging the intelligent information translator responsive to at least whether an instant communications client used by the second party supports text messaging.

149. The computer-readable medium of claim 148 comprising instructions which, when executed by a processor, causes the communication system to perform a method comprising the steps of:

determining whether the second party desires to use text messaging; and

conditionally performing said engaging the intelligent information translator responsive to at least whether the second party desires to use text messaging.

150. The computer-readable medium of claim 149 wherein said determining whether the second party desires to use text messaging comprises receiving indication from the second party as to whether the second party desires to use text messaging.

151. The computer-readable medium of claim 149 wherein said determining whether the second party desires to use text messaging comprises accessing profile information in a database, the profile information indicating at least whether the second party desires to use text messaging and the profile information being associated with at least one of the second party and the instant communications client being used by the second party.

152. The computer-readable medium of claim 148 comprising instructions which, when executed by a processor, causes the communication system to perform a method comprising the steps of:

determining whether the instant communications client supports more than one type of communications; and

conditionally performing said determining whether the second party desires to use text messaging responsive to at least whether the instant communications client support more than one type of communications.

153. The computer-readable medium of claim 152 wherein said determining whether the instant communications client supports more than one type of communication comprises receiving indication from the second party via the instant communications client as to at least whether the instant communications client supports more than one type of communication.

154. The computer-readable medium of claim 152 wherein said determining whether the instant communications client supports more than one type of communication comprises accessing profile information in a database, the profile information indicating at least whether the instant communications client supports more than one type of communication and the profile information being associated with at least one of the second party and the instant communications client being used by the second party.

155. The computer-readable medium of claim 137 wherein said determining whether instant communications may be established with the second party comprises:

determining a presence identifier associated with the second party;

obtaining presence state information pertaining to the second party, the presence identifier being used to specify the second party to the presence server; and

determining whether instant communications may be established with the second party responsive at least to a presence state for the second party as indicated by the presence state information.

156. The computer-readable medium of claim 155 wherein the presence identifier is any one of a screen name, a logical address, an electronic pseudonym, a chat identifier and an instant messaging identifier.

157. The computer-readable medium of claim 155 wherein said determining a presence identifier comprises:

prompting the calling party for the presence identifier; and

receiving the presence identifier via the telephone call.

158. The computer-readable medium of claim 155 wherein said determining a presence identifier includes:

obtaining identifying information associated with the second party including at least one of a telephone number, an email address, a given name and a personal identification number; and

querying a database to obtain the presence identifier based on the identifying information.

* * * * *