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1. Broadband cable telephony network architecture IP ITN network architecture reference model

US7120139B1 | AT&T Corp

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Inventors: KUNG FEN-CHUNG, RUSSELL JESSE
                        EUGENE, SANKALIA ANISH, WANG SPENCER

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                        H04L 65/1036, H04L 65/80, H04M 3/42289, H04M 7/006,
                        H04M 7/0093, H04M 7/1215, H04M 7/1255, H04M 7/126,
                        H04M 7/128, H04M 7/129, H04Q 3/0025, H04Q 3/0045
IPC classification: H04L 12/28, H04L 12/66, H04M 3/42, H04L 29/06, H04M
                        7/00, H04Q 3/00

External links: Google Patents, Espacenet, PatBase Express,
                        PatBase, Orbit
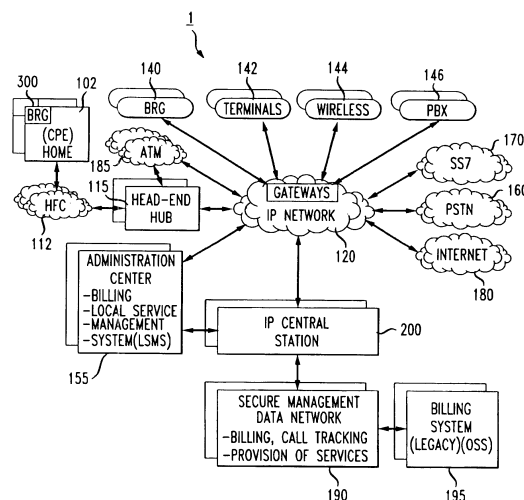
Abstract
The present invention provides a system and method for a reliable, low-cost, secure Internet Protocol (IP) based network that provides broadband-based voice communications as well as video and data communications. The IP network is arranged to function with the infrastructure of the Public Switched Telephone Network (PSTN), to control telephone calls in SS 7 type networks and to provide the features, applications, and services of the typical SS 7 networks in a voice over IP network. The present invention supports large effective call volumes, allows accommodation of a wide range of broadband-based service platforms, provides flexibility to support current and future calling feature services, and provides high quality voice transmission.

First claim
A two-way communication system for providing universal multimedia applications including voice calls over Internet Protocol, comprising at least:
a Broadband Residential Gateway coupled to a plurality of customer premises equipment and to a Hybrid Fiber Coaxial network,
a Head End Hub comprising:
a Cable Modem Bank coupled to an Edge Router and to a Head End,
the Edge Router, coupled to the Cable Modem Bank and to a High Speed Packet Network,
wherein the Head End Hub is coupled to the Hybrid Fiber Coaxial network and to a High-Speed Packet Network,
the High Speed Packet Network coupled to the Head End Hub and to an Internet Protocol Central Office, and
the Internet Protocol Central Office, coupled to the High Speed Packet Network and to an external network.

2. User programmable fail-proof IP hotline/warm-line

US6690675B1 | AT&T Corp

Bibliographic data

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Inventors: KUNG FEN-CHUNG, RUSSELL JESSE
                       EUGENE, SANKALIA ANISH, WANG SPENCER

CPC classification: H04L 65/1026, H04L 65/1036, H04L 65/1069, H04M 11/04
IPC classification: H04M 11/04, H04L 29/06

External links: Google Patents, Espacenet, PatBase Express,
   PatBase, Orbit

Abstract

An IP telephony system hotline dials a pre-programmed or predetermined telephone number virtually instantaneously when the phone goes off hook in order to summon help or a public safety agency. In addition to immediately dialing the police or fire, the system can be programmed to call several numbers simultaneously or in some user-specified sequence. In addition to immediately dialing a number when a phone goes off hook, the system contemplates dialing a number in response to certain detectable.

First claim

A broadband residential gateway comprised of:

a) a high speed bus,

b) a processor bus,

c) a distributed processing controller connected to said high speed bus and to said processor bus,

d) a plurality of functional units connected to said high speed bus, including

1) a universal remote control receiver module,

2) a display, display driver, touch screen logic module,

3) one or more TV port modules,

4) one or more data port modules,

5) one or more telephony port modules

6) one or more peripheral port modules,

7) one or more intercom modules,

8) one or more wireless interface modules,

9) one or more voice recognition/voice synthesis modules,

10) a set-top box module,

11) a memory for storing information and operating data within the broadband residential gateway,

12) a transceiver for communicating with one or more external broadband networks,

13) an operating program store for storing at least portions of operating programs for the broadband residential gateway and devices connected thereto, and

14) a security processor, smart card and/or credit card interface module,

e) a plurality of distributed processing modules connected to said processor bus, including

1) a telephony processing module,

2) a data processing module,

3) a video processing module,

4) an auxiliary processing module,

5) an IP processing module, and

6) an operations administration maintenance and provisioning processing module,

f) said distributed processing controller being programmed to automatically place a telephone call to a predetermined telephone number in response to the occurrence of a predetermined physical event that causes an electrical signal to be generated at one of said port modules.
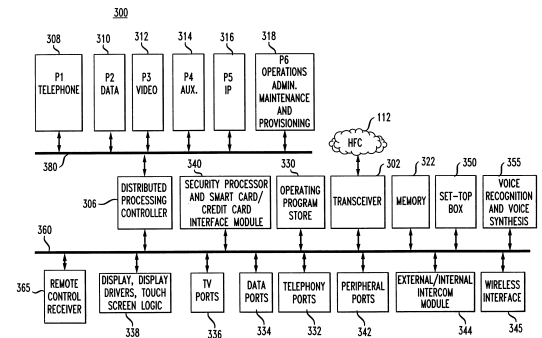
3. Handheld integrated IP device

EP1113620A1 | AT&T Corp

Bibliographic data
Publication date: 2001-07-04
Application date: 2000-12-22
Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, WALKER HOPETON, WANG SPENCER C

CPC classification: H04L 12/2801, H04L 12/5692, H04L 45/302, H04M 15/49, H04M 15/50, H04M 15/53, H04M 15/55, H04M 15/56, H04M 15/8207, H04M 2215/0172, H04M 2215/202, H04M 2215/2026, H04M 2215/22, H04M 2215/32, H04M 2215/44, H04M 2215/46, H04M 2215/52, H04M 2215/7813, H04M 7/006, H04N 21/4622, H04N 21/4782, H04Q 11/04, H04Q 2213/13034, H04Q 2213/13093, H04Q 2213/13097, H04Q 2213/13098, H04Q 2213/13106, H04Q 2213/1313, H04Q 2213/13138, H04Q 2213/13166, H04Q 2213/13176, H04Q 2213/13196, H04Q 2213/13204, H04Q 2213/13209, H04Q 2213/1322, H04Q 2213/1324, H04Q 2213/13248, H04Q 2213/1329, H04Q 2213/13332, H04Q 2213/13337, H04Q 2213/13349, H04Q 2213/13389, H04W 4/24, H04W 80/00, H04W 88/16

IPC classification: H04L 12/28, H04M 15/00, H04N 7/16, H04M 7/00, H04L 12/54, H04Q 11/04, H04L 12/725

External links: Google Patents, Espacenet, EP Register, PatBase Express, PatBase, Orbit


FIG. 1

Abstract
An integrated Internet Protocol (IP) device for communicating with a broadband network through a gateway to the network. The integrated IP device provides the user with a variety of communication pathways for transmitting a communication to the gateway. Also, the integrated IP device can automatically select the most desirable communication pathways for transmitting a communication.

First claim
A method of transmitting a communication to customer premises equipment connected to a broadband communication system, comprising:
receiving a communication for transmission along one of a plurality of communication pathways;
determining which of said plurality of communication pathways is currently available for carrying the communication;
determining which of said available communication pathways is the most cost efficient for carrying the communication;
designating the communication for transmission along at least one of said most cost efficient of the available communication pathways.
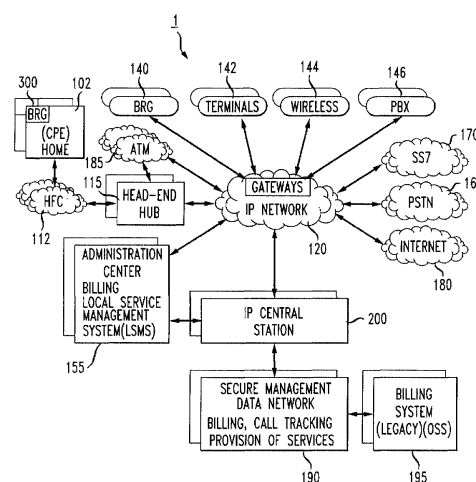
4. IP leased line

EP1122915A2 | AT&T Corp

Bibliographic data

Publication date: 2001-08-08
Application date: 2000-12-22
Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, RUSSELL JESSE EUGENE, WALKER HOPETON, WANG SPENCER

CPC classification: H04L 12/2801, H04L 47/15, H04L 47/2408, H04L 47/70, H04L 47/724, H04L 47/781, H04L 47/805

IPC classification: H04M 11/00, H04L 12/28, H04M 3/00, H04L 12/54, H04L 47/80, H04L 47/724

External links: Google Patents, Espacenet, EP Register, PatBase Express, PatBase, Orbit

FIG. 1
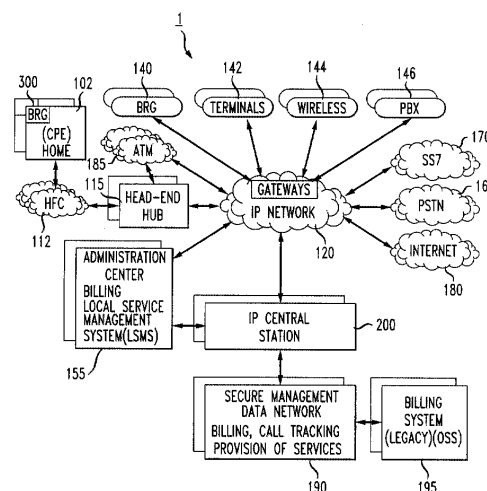
Abstract

The present invention includes a method, system and computer program product for providing for transmission of internet protocol traffic along a transmission path in a broadband communication system such that a virtual leased IP line provides a guaranteed minimum bandwidth. In one embodiment, the method includes the steps of requesting, by a user, reservation of a guaranteed minimum bandwidth sufficient for a predetermined IP traffic usage; selecting automatically and dynamically, by a call manager in response to requesting by the user, a transmission path for the virtual leased IP line wherein the path provides at least the guaranteed minimum bandwidth sufficient to accommodate the predetermined IP traffic usage; and reserving, by the call manager, the bandwidth for the transmission path.

First claim

A method for transmission of internet protocol traffic along a transmission path in a broadband communication system to provide a guaranteed minimum bandwidth over a virtual leased Internet Protocol (IP) line, comprising the steps of:
requesting, by a user, reservation of a guaranteed minimum bandwidth sufficient for a predetermined IP traffic usage;
selecting automatically and dynamically, by a call manager in response to requesting by the user, a transmission path for the virtual leased IP line wherein the path provides at least the guaranteed minimum bandwidth sufficient to accommodate the predetermined IP traffic usage;
reserving, by the call manager, the bandwidth for the transmission path.

5. Personal IP follow-me service

US6687360B2 | AT&T Corp

Bibliographic data
Publication date: 2004-02-03
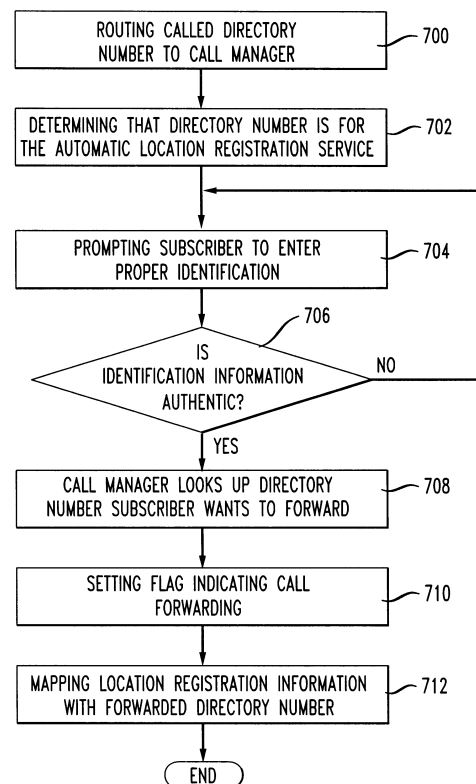Application date: 1999-12-30
Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, RUSSELL JESSE EUGENE, SANKALIA ANISH, WALKER HOPETON S, WANG SPENCER C

CPC classification: H04M 3/548, H04M 7/006
IPC classification: H04M 7/00, H04M 3/54

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A method and system for providing a dynamic call forwarding service for a subscriber in an IP telephone network is disclosed. When a predetermined telephone number is called from a telephone other than the subscriber's home telephone, the subscriber enters a code for location registration. The directory number of the telephone the subscriber is using is determined for location registration. A call for the subscriber's home telephone is then routed to the telephone the subscriber used for location registration.

First claim

A method for providing a follow-me call forwarding service in an IP telephone network, comprising the steps of:
determining when a subscriber uses an assigned code for data access at a new location which is different from the subscriber's directory number;
identifying the directory number of the subscriber's new location;
identifying the subscriber from said assigned code;
automatically mapping the directory number of the subscriber's new location with a stored directory number, said stored directory number corresponding to the subscriber's directory number;
routing a voice call originally for the subscriber at the subscriber's directory number to the directory number of the subscriber's new location, said routing comprising sending IP data packets to the subscriber's new location, the IP data packets being associated with digital samples of said call.

6. Method for billing IP broadband subscribers

US6775267B1 | AT&T Corp

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Publication date: 2004-08-10
Application date: 1999-12-30
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Inventors: KUNG FEN-CHUNG, SANKALIA ANISH,
WALKER HOPETON, WANG SPENCER

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47/765, H04L 47/805, H04L 47/808, H04L 47/824, H04M
15/8016, H04M 15/8044, H04M 15/81, H04M 15/83, H04M
2215/0112, H04M 2215/0168, H04M 2215/018, H04M
2215/22, H04M 2215/42, H04M 2215/7414, H04M 2215/745,
H04M 2215/82
IPC classification: H04L 12/56, H04L 12/66, H04L 12/14

External links: Google Patents, Espacenet, PatBase Express,
PatBase, Orbit
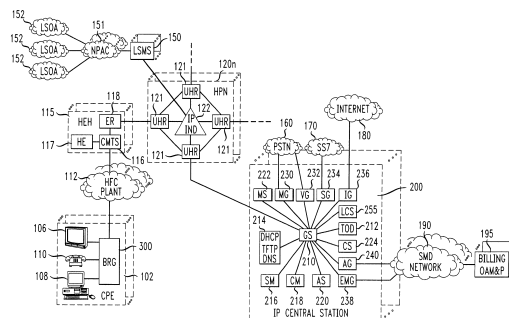
Abstract
A method of billing a variable bit rate communication between a first terminal and a distant terminal to a broadband
subscriber permits changing billing parameters during a call in real time in response to user inputs including user
requested changes in quality of service, changes in data rate and changes in preferred service provider. A variable bit
rate communication to be billed has a variable quality of service related to the degree of utilization of a plurality of
different networks. The billing method comprises the steps of: i.) receiving user identification data at a first terminal
and data representing a required bit rate and a default quality of service selected by the user, ii.) verifying the user
identification data to be associated with the broadband service subscriber, iii.) determining least cost alternative
network resources available for achieving the communication at the user selected default quality of service and the
required bit rate, iv.) determining cost data associated with the network resources, v.) outputting to the user a least
cost for the communication according to their selected default quality of service and alternative least cost network
resources, vi.) coupling the first terminal and the distant terminal via the least cost determined network resources at
the default quality of service and the required bit rate responsive to user authorization and vii.) billing for the
communication at the default quality of service and according to the required bit rate after the termination of the
communication.

First claim
A method of billing a variable bit rate communication between a first terminal and a distant terminal to a broadband
subscriber, the variable bit rate communication having a variable quality of service related to the degree of utilization
of a plurality of different networks comprising the steps of:
i.) receiving user identification data at said first terminal and data representing a required bit rate and a default quality
of service selected by said user;
ii.) verifying said user identification data to be associated with said broadband subscriber;
iii.) determining least cost alternative network resources available for achieving said communication at said default
quality of service and said required bit rate;
iv.) determining cost data associated with said network resources;
v.) outputting to said subscriber a least cost for said communication according to said default quality of service and
said least cost alternative network resources;
vi.) coupling said first terminal and said distant terminal via said least cost determined network resources and said
default quality of service at said required bit rate responsive to user authorization;
vii.) billing for said call at said default quality of service and according to said required bit rate after the termination of
the communication.

7. Call hold with reminder and information push

US7558251B1 | AT&T Intellectual Property II LP

Bibliographic data

Publication date: 2009-07-07
Application date: 2004-09-14
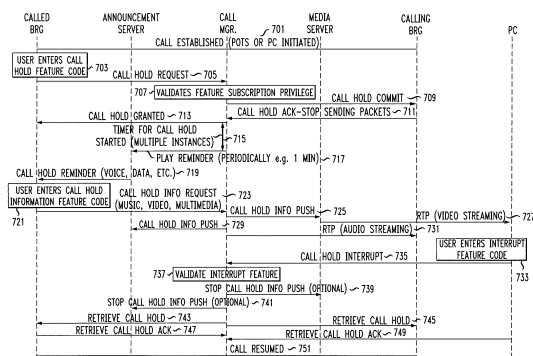Earliest priority date: 1999-12-30

Inventors: HUANG LAURA, KUNG FEN-CHUNG,
                                    RUSSELL JESSE EUGENE, WALKER
                                    HOPETON, WANG SPENCER

CPC classification: H04L 12/66
IPC classification: H04L 12/66

External links: Google Patents, Espacenet, PatBase Express,
                                PatBase, Orbit

Abstract
A broadband communication system including an Internet Protocol Telephony Network and public switched telephone network, including apparatus and methods for placing a call on hold in a way that significantly reduces the amount of network bandwidth utilized by the call while the call is on hold. When a call is placed on hold, embodiments of the architecture of the telephony network of the present invention allows the network to essentially "forget" about the call placed on hold. In other words, a call that is on hold may require very little, or even zero, bandwidth within the telephony network. Accordingly, the total necessary bandwidth capacity of the telephony network may be smaller than it would be if calls on hold were to consume precious network bandwidth as is found in existing telephony systems.

First claim
In an internet protocol (IP) telephony network, a method for pushing information while a call over an IP telephony connection between a first party and a second party is on hold, the method comprising
the network receiving from the first party a first request to place the call on hold;
responsive to the first request to place the call on hold, the network forwarding to the second party a second request to place the call on hold;
the network receiving from the first party a call hold information request while the call is on hold;
responsive to the call hold information request, the network generating a stream of IP packets and forwarding to the second party while the call is on hold the stream of IP packets representing at least one of audio, video, speech, text, data, graphics, and multimedia,
the network maintaining said call as an ongoing call over said IP telephony connection without said connection being disconnected, and without said connection being terminated, and without said connection being torn down during the entire period that said first and second parties are on hold.

8. Personal control of address assignment and greeting options for multiple BRG ports

US7564839B1 | AT&T Intellectual Property II LP

Bibliographic data

Publication date: 2009-07-21
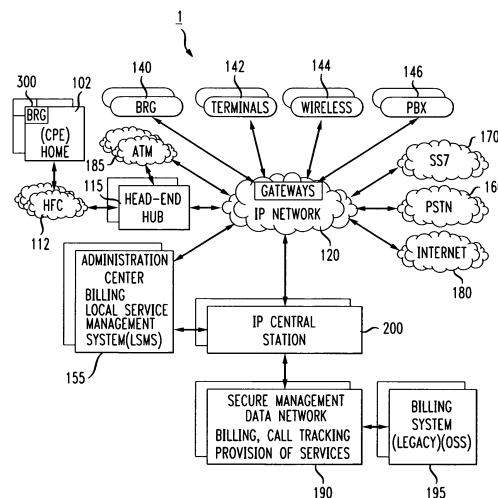Application date: 2007-01-03
Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, SANKALIA ANISH, WANG SPENCER C, RUSSELL JESSE E

CPC classification: H04L 65/1026, H04L 65/1036, H04L 65/1069, H04M 3/543, H04M 7/0066
IPC classification: H04L 12/66

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A method and apparatus for providing multiple telephone lines using a single directory number. A method and apparatus for associating multiple directory numbers with multiple telephone lines. A broadband residential gateway (BRG) is a user interface to a broadband communication system providing packetized telephone service and other media services. The BRG has multiple ports, and each port is connected to one or more telephones. The multiple ports may be mapped to a single directory number, or the multiple ports may be mapped to multiple directory numbers. The BRG can provide greeting and message features. A greeting may instruct a caller to select a port which is associated with a party the caller is attempting to reach. Also, a message, played after the greeting, may further instruct the caller.

First claim

A method of associating a directory number with multiple ports on a broadband residential gateway located at a customer premises and connected to an Internet Protocol based packet network supporting Internet Protocol telephony service, said method comprising the steps of:
mapping said directory number with said multiple ports on said broadband residential gateway,
receiving an incoming call from said Internet Protocol based packet network,
providing a greeting,
selecting a port using said greeting, and
directing said incoming call to said selected port.

9. Simplified IP service control

US6775273B1 | AT&T Corp

Bibliographic data

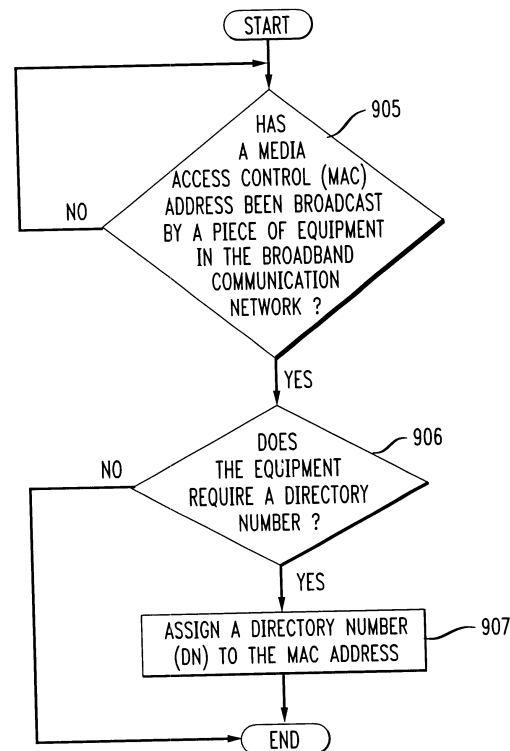Publication date: 2004-08-10
Application date: 1999-12-30
Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, RUSSELL JESSE EUGENE, WALKER HOPETON, WANG SPENCER

CPC classification: H04L 65/1043, H04N 21/4622, H04N 21/4782
IPC classification: H04L 29/06, H04L 29/12, H04N 21/462, H04N 21/4782

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

The present invention includes a number of systems and techniques for service control for a broadband communications system that includes voice, data and multimedia audio and video communication. One variation of the present invention includes service control based on multiple relationships between equipment specific unique media access control (MAC) addresses, system addresses and directory numbers to enable the properly route traffic between the broadband communication system and legacy telephone systems. In this case, one server, for example a dynamic host control protocof (DHCP) server is used to assign system addresses to equipment unique MAC addresses and another server, for example a call manager (CM) server is used to assign directory numbers to the system addresses. Another variation of the present invention includes service control based on multiple relationships between equipment specific unique media access control (MAC) addresses and directory numbers (DNs) to enable the properly route traffic between the broadband communication system and legacy telephone systems. In this case the DHCP server is not needed to assign system addresses to MAC addresses.

First claim

A method for facilitating communications in an integrated broadband communication system, comprising the steps of:
assigning a directory number to a device which has a media access control name in the broadband communication system by having a direct relationship to said media access control name,
routing packetized information traffic using said media access control name as a destination address;
receiving a call from a legacy telephone system placing voice information in a packet using said media access control name as a destination address.

10. Computer readable medium with embedded instructions for providing communication services between a broadband network and an enterprise wireless communication platform within a residential or business environment

US8155155B1 | AT&T Intellectual Property II LP

Bibliographic data
Publication date: 2012-04-10
Application date: 2010-03-31
Earliest priority date: 2001-06-14

Inventors:	CHOW ALBERT T, ERVING RICHARD HENRY, KIM JINMAN, MILLER ROBERT RAYMOND II, RUSSELL JESSE E, YING WENCHU
CPC classification:	H04L 12/2801, H04L 65/1026, H04L 65/1036, H04L 65/1043, H04M 2207/20, H04M 7/0048, H04M 7/06, H04M 7/1235, H04M 7/1255, H04W 4/00, H04W 74/00, H04W 76/10, H04W 76/30
IPC classification:	H04B 7/00, H04L 12/56, H04L 12/28, H04L 12/26, H04L 12/66, H04J 1/00, H04L 29/06, H04M 7/00, H04L 1/00
External links:	Google Patents, Espacenet, PatBase Express, PatBase, Orbit
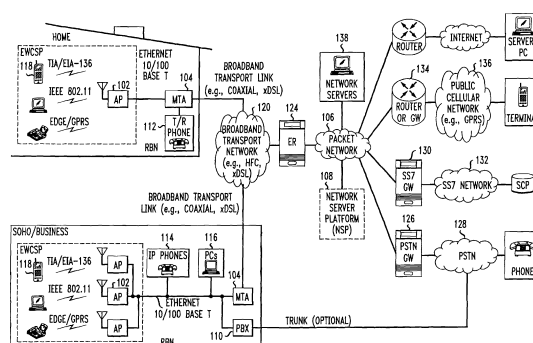
Abstract
The present invention sets forth computer-readable non-transitory medium having computer-executable instructions for providing network-centric service distribution method that integrates a wireless access system/service with conventional telecommunications services in the residence, SOHO, business or public environment through the use of a local broadband network, such as a Residential-Business Broadband Network (RBN). The RBN communicates with the service provider's broadband transport network and broadband packet network to facilitate end-to-end packet telecommunication services. Signals from a plurality of wireless devices are accepted and forwarded to an IEEE 802.11b interface for a wireless modem and/or to an Ethernet interface for a Voice over Internet Protocol (VOIP)/Ethernet Processor, where the forwarded signals comprise intranet telephony and data.

First claim
A computer-readable non-transitory medium having computer-executable instructions for providing network-centric service distribution that establishes a wireless access service in a local environment through the use of a local Residential/Business Network (RBN) that communicates with a service provider's broadband transport network to facilitate end-to-end packet telecommunication services, wherein the computer-executable instructions are executed on a processor and comprise the steps of:
implementing access functions within a Media Terminal Adapter (MTA) in the local RBN to establish communication between an access port (AP) located within a wireless communications services platform and said service provider's broadband transport network, wherein the broadband transport network comprises at least one of: a hybrid fiber coaxial cable system, an xDSL system, a fixed wireless system, and a fiber optic system, said access port comprising a miniaturized radio base station for establishing analog and digital communication channels between the MTA and said plurality of wireless local RBN devices; and
implementing call and service termination functionality within the MTA to establish communication between at least one RBN devices and said service provider's broadband transport network.

11. BRG with PBX capabilities

US7075918B1 | AT&T Corp

Bibliographic data

Publication date: 2006-07-11
Application date: 1999-12-30
Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, RUSSELL JESSE EUGENE, WANG SPENCER, WALKER HOPETON

CPC classification: H04L 65/1053, H04M 2201/50, H04M 2203/2044, H04M 2207/35, H04M 3/20, H04M 3/42059, H04M 3/42093, H04M 3/42323, H04M 3/42365, H04M 3/4878, H04M 3/5315, H04M 3/533, H04M 3/56, H04M 3/58, H04M 7/0069, H04M 7/1215

IPC classification: H04L 12/66, H04L 29/02, H04M 3/42, H04M 7/00, H04M 11/06

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
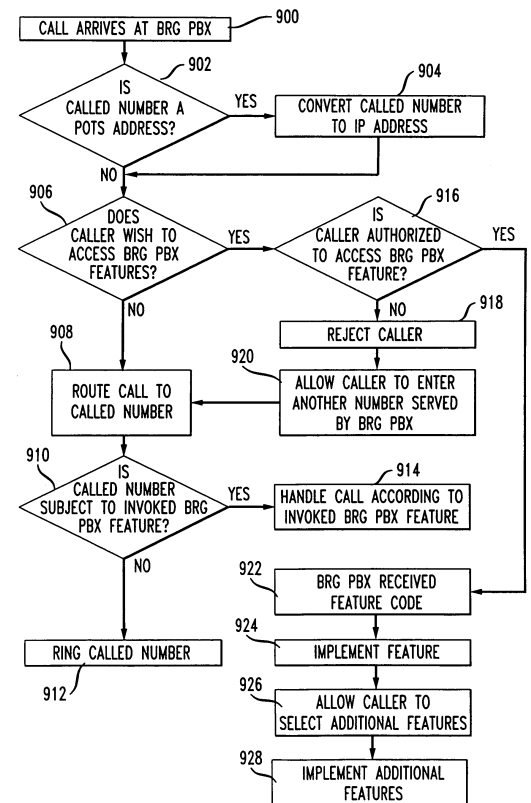
Abstract
A residential private branch exchange (PBX) allowing IP telephones, analog telephones and computers to connect to an IP communication network. A broadband residential gateway (BRG) PBX provides residences with multiple phone lines capability and the implementation of complex calling features traditionally associated with complex and expensive business PBX systems. The BRG PBX provides an open architecture interface minimizing problems during installation and operation, minimizes interoperability problems across multi-vendor equipment platforms and may provide customers with an option to bypass the local telephone company's high cost infrastructure. The BRG PBX may also provide a range of services from basic calling with few features to highly sophisticated calling features servicing multiple phone lines to the residence. The BRG PBX may be configured to connect multiple BRG PBX systems together in a Local Area Network (LAN) or Wide Area Network (WAN) configuration. These network configurations may be implemented to connect neighborhoods or families across multiple geographic regions. In addition to having the capability of connecting to each other, the BRG PBXs may be connected to IP Central Stations forming an IP communication network.

First claim
A method for providing calling services on a residential PBX, comprising the steps of:
determining if an incoming call to a called number has a POTS address, and if so, converting the POTS address to an Internet Protocol address;
determining whether the caller desires to access residential PBX calling features and if so, implementing the residential PBX calling features, otherwise routing the incoming call to the Internet Protocol address;
determining if the called number has residential PBX calling features engaged, and if so, routing the incoming call according to the engaged residential PBX calling features;
determining whether the caller has authorization to access the residential PBX calling features;
rejecting the caller if the caller does not have authorization to access the residential PBX calling features;
allowing the rejected caller to enter another called number after attempting to gain authorization to the residential PBX calling feature.

12. IP conference call waiting

Bibliographic data
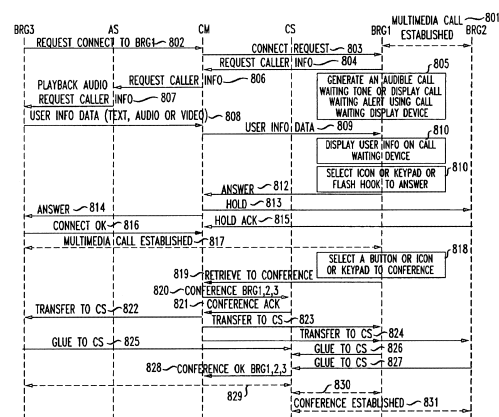
Publication date: 2004-11-09
Application date: 1999-12-30
Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, WALKER HOPETON,
                         WANG SPENCER

CPC classification: H04Q 2213/13034, H04Q 2213/1315, H04Q 2213/1324,
                         H04Q 2213/13389, H04Q 3/0016
IPC classification: H04Q 3/00

External links: Google Patents, Espacenet, PatBase Express,
                         PatBase, Orbit

Abstract

An Internet Protocol Telephony Network and public switched telephone network that allows one or more call waiting callers to dynamically join in an existing and to establish a multiple-party conference call including the call waiting call. A call waiting call may also be added to an existing conference call.

First claim

In a telephony network, a method for establishing a conference call, the method comprising the steps of:
providing a first call between a first party and a second party;
receiving a first request from a third party to provide a call waiting call between the third party and the first party;
receiving a second request from the first party to establish the call waiting call between the third party and the first party;
placing the second party on hold in response to the second request;
establishing the call waiting call between the third party and the first party in response to the second request;
converting the first call and the call waiting call into a conference call such that the conference call includes the first party, the second party, and the third party,
wherein the step of placing the second party on hold includes requesting the second party to stop sending data to the first party,
wherein the step of converting includes polling at least one network conference server configured to provide multiparty conference calls in order to locate a conference server with available conferencing resources and providing said conference call via said located conference server by directing data packets associated with the first party, the second party, and the third party to said located conference server whereby said located conference server multiplexes said data packets.

13. Method for performing roaming amongst multiple IP networks

EP1113640B1 | AT&T Corp

Bibliographic data

Publication date: 2006-11-15
Application date: 2000-12-22
Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, WALKER HOPETON S,
                    WANG SPENCER C

CPC classification: H04L 61/25, H04W 8/26, H04W 80/04
IPC classification: H04L 12/56, H04L 12/28, H04L 29/06, H04L 29/12

External links: Google Patents, Espacenet, EP Register,
                    PatBase Express, PatBase, Orbit

Abstract

A method of allowing subscribers of a computer network to roam among a plurality of networks. When the subscriber attempts to communicate from a network he is visiting, the visiting network server will communicate with the home network server to verify the authenticity of the subscriber. Once authentication is completed, the visiting server will issue a temporary visiting IP address to the subscriber. The visiting network will also advise the home network of the temporarily assigned IP address. The home network stores the temporary IP address in an IP address translation database. The subscriber will then be able to communicate with his home network from the remote network and receive all of the network services available to him from his home network.

First claim

A method for use by a remote communications network (701) for providing network communications to a subscriber, the method comprising the steps of:
receiving a communication from a communications terminal (700), the communications terminal (700) being adaptable for connecting to a plurality of communications networks (120, 701);
assigning a temporary Internet protocol address to the communications terminal (700);
characterized in that the communication terminal (700) has a permanent Internet protocol address registered in one of the plurality of communications networks (120, 701), wherein the one of the plurality of communications networks (120, 701) is a home service provider network (120) of the subscriber and wherein at least an other one of the plurality of communications networks (120, 701) is the remote communications network (701), and further characterized by the steps of: determining, based on the permanent Internet protocol address, which of the plurality of communications networks (120, 701) is the home service provider network (120);
advising the home service provider network (120) of the temporary Internet protocol address such that to provide network communications to the subscriber when the subscriber is unable to directly access his home service provider network (120).

14. POTS/broadband voice cross-connect system

US7512114B2 | Agere Systems LLC

Bibliographic data

Publication date: 2009-03-31
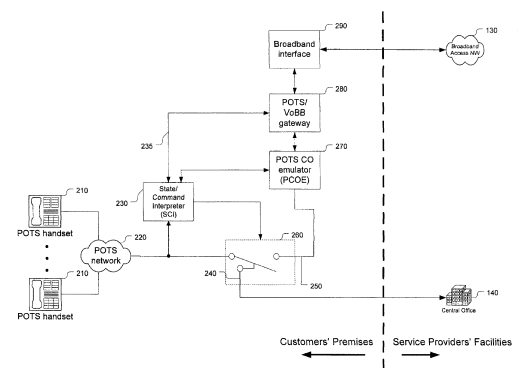Application date: 2002-09-13
Earliest priority date: 2002-09-13

Inventors: LATURELL DONALD R

CPC classification: H04L 12/5692, H04M 7/0057, H04M 7/0069
IPC classification: H04M 11/00, H04L 12/28, H04L 12/66, H04M 7/00

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A communications apparatus supporting seamless integration of VoBB and POTS services can be used with or embodied in any communications appliance or voice/data gateway product that has connectivity to both services. The apparatus supports user-specified usage of one service over another on a call-by-call and/or call-category basis. For example, all long-distance outgoing calls (or those belonging to specific area codes or regions) may be specified to use the VoBB service and all local calls or just emergency "9-1-1" calls may be specified to use the POTS service. The apparatus also enables communication service features such as multiple-line (ML), three-way-calling (TWC), and conference calling (CC)) to be managed intelligently across the VoBB and POTS services.

First claim

Customer premises equipment (CPE), comprising:
a cross-connect configured to selectively connect a local communication device with a plain old telephone system (POTS) central office (CO) or a voice-over-broadband (VoBB) gateway or both; and
a controller configured to (i) monitor one or more user-initiated signals provided by the local communication device and (ii) based on the one or more user-initiated signals, determine whether to connect the local communication device with the POTS CO or the VoBB gateway or both,
wherein the controller is adapted to determine whether to connect the local communication device to the POTS CO or to the VoBB gateway or both based on one or more voice commands provided to the local communication device, the one or more voice commands spoken by a user and processed by speech recognition.

# 15. Local number portability database for on-net IP call

US6678265B1 | AT&T Corp

Bibliographic data

Publication date: 2004-01-13
Application date: 1999-12-30
Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, RUSSELL JESSE
                      EUGENE, SANKALIA ANISH, WALKER
                      HOPETON S, WANG SPENCER C

CPC classification: H04L 12/66
IPC classification: H04L 12/66

External links: Google Patents, Espacenet, PatBase Express,
                      PatBase, Orbit
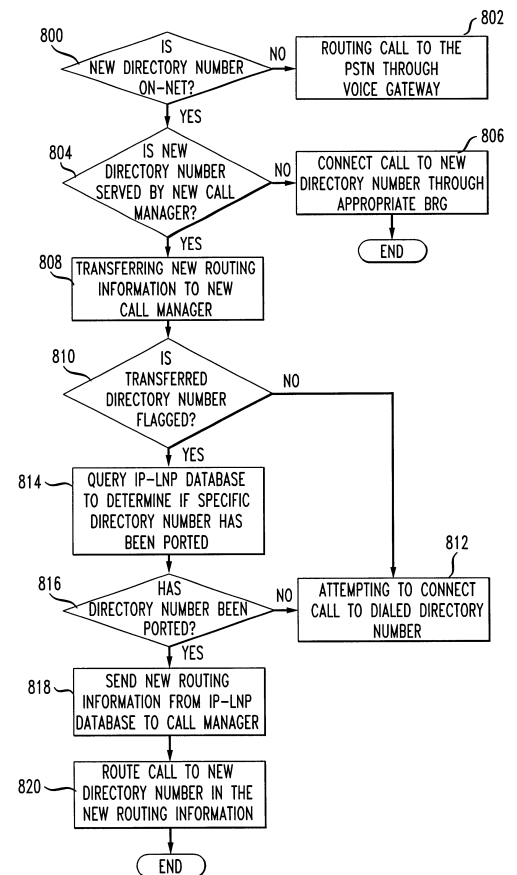
Abstract
A method for connecting a call in an IP telephony system is disclosed. A dialed unique identifier is routed to a network device. The network device determines whether the dialed unique identifier has been ported. If the dialed unique identifier has not been ported, the network device attempts to connect the call to the dialed unique identifier. If the dialed unique identifier has been ported, new routing information is sent from a database to the network device. The network device then attempts to connect the call using the new routing information.

First claim
A method for connecting a call in an IP telephony system having two or more call managers, each of said call managers operating as a centralized control center for the set-up and tear-down of calls to directory numbers served by said call managers, the method comprising
a) an individual one of said call managers
i) receiving a dialed directory number;
ii) sending a query to an IP local number portability database to determine if the received directory number has been ported;
iii) attempting to connect the call using the received directory number if the received directory number has not been ported;
b) if said received directory has been ported, said individual one of said call managers
iv) receiving a new directory number from said database;
v) determining whether the new directory number is served by said individual one of said call managers or by another one of said call managers;
vi) attempting to connect the call using the new directory number if it is served by said individual one of said call managers;
vii) transferring said new directory number to an other one of said call managers if said new directory number is served by said other one of said call managers;

c) said other one of said call managers receiving said transferred new directory number and performing at least said steps ii) and iii) using the transferred new directory number.

16. Multiple call waiting in a packetized communication system

US6633635B2 | AT&T Corp

Bibliographic data

Publication date: 2003-10-14
Application date: 1999-12-30
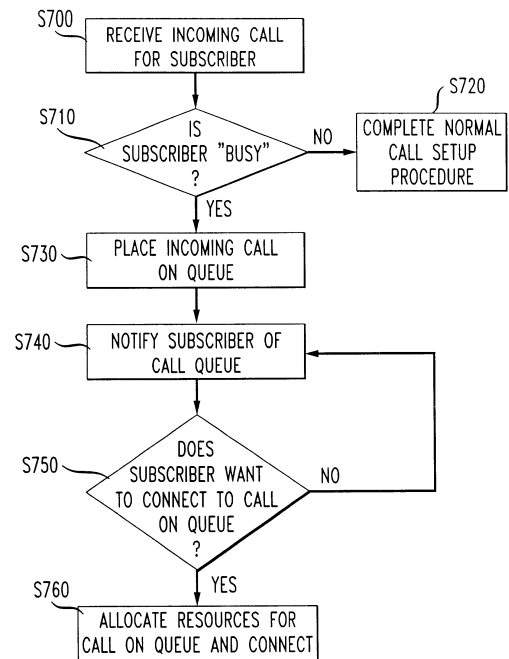Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, RUSSELL JESSE E,
                    WALKER HOPETON, WANG SPENCER C

CPC classification: H04L 12/2801, H04M 2242/22, H04M 3/42042, H04M
                    3/42059, H04M 3/4288, H04M 7/0033, H04M 7/006, H04M
                    7/1255, H04M 7/126, H04M 7/129
IPC classification: H04L 12/28, H04M 7/00, H04M 3/428

External links: Google Patents, Espacenet, PatBase Express,
                    PatBase, Orbit

Abstract

In a packetized communications system call waiting functionality is expanded to provide for handling of unlimited calls concurrently of one or more service types. When a subscriber is engaged in an ongoing call, incoming calls can be placed on a call queue by a call manager such that bandwidth and other resources are not allocated to a waiting call between the call manager and broadband residential gateway, and thereafter can be accessed by the subscriber in the order received or in the order desired by the subscriber. For subscribers with a device having video display capability, identification information regarding each call in the queue such as service type waiting time and caller identification information may be displayed at the subscriber's premises to allow the subscriber to manage their incoming calls. Also, a particularized tone may be heard to identify the incoming call including its service type.

First claim

In a broadband communications network where a subscriber is engaged in a first call, a method for providing a call waiting queue, said method comprising the steps of:
receiving a second call from a calling party directed to the subscriber;
placing the second call on the call waiting queue;
notifying the subscriber engaged in the first call that the second call is waiting;
detecting a waiting condition of the subscriber;
sending a message to the calling party indicating the status of the second call based on the waiting condition of the subscriber;
receiving a data packet from the calling party for updating the status of the second call;
receiving a third call directed to the subscriber;
placing the third call on the call waiting queue;
notifying the subscriber engaged in the first call that the third call is waiting,
wherein one of the second call and the third call is placed on the call waiting queue when the other one of the second call and the third call is on the call waiting queue.

17. Enhanced subscriber IP alerting

US6826173B1 | AT&T Corp

Bibliographic data

Publication date: 2004-11-30
Application date: 1999-12-30
Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, RUSSELL JESSE
                      EUGENE, SANKALIA ANISH, WALKER
                      HOPETON, WANG SPENCER

CPC classification: H04L 12/14, H04L 12/1457, H04M 15/06, H04M 15/08, H04M
                      15/56, H04M 15/745, H04M 15/88, H04M 2215/0108, H04M
                      2215/0116, H04M 2215/0168, H04M 2215/202, H04M
                      2215/62, H04M 3/436, H04M 7/006

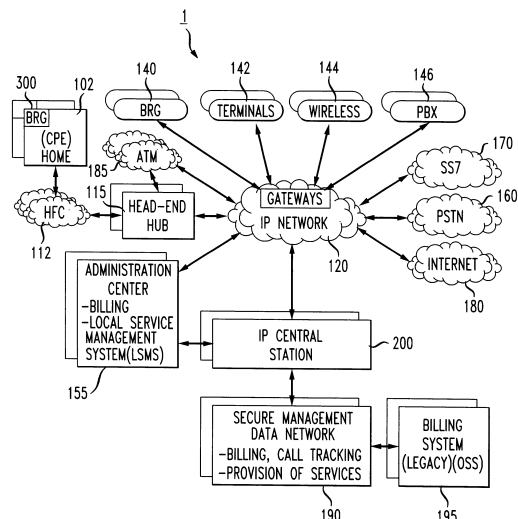IPC classification: H04M 15/06, H04M 7/00, H04L 12/14, H04M 3/436

External links: Google Patents, Espacenet, PatBase Express,
                      PatBase, Orbit

Abstract

A method of alerting a user of a variable bit rate communication between a first terminal and a distant terminal over alternative networks including a circuit switched network and a packet network permits the user the opportunity to change alerting preferences from a remote location or locally and to predetermine instructions for a calling party. A method of alerting a broadband user at a first terminal of an incoming multimedia call from a particular calling party comprises the steps of receiving input data at a broadband gateway of user preferences of calling parties, calling party locations, and terminal configuration data for a terminal normally utilized by the user, alerting a called user by utilizing a user-defined alerting scheme, the scheme including identifying the multimedia call as one specifically intended for the user among a plurality of different users and identifying one of the identity or the location of the calling party, comparing the identity or location with said user preferences and alerting the calling party of the priority of the call, the priority of the call including an indication of whether the called party has left instructions for the calling party. In accordance with a further embodiment, a method of alerting a broadband user at a first terminal of an incoming multimedia call from a particular calling party comprises the steps of receiving input data at a broadband gateway of user preferences of calling parties, calling party locations, and terminal configuration data for a terminal normally utilized by the user, comparing the user preferences with data describing the incoming multimedia call, and, if the terminal normally utilized by the user is not appropriate for the call, alerting the called user to one of moving to another terminal or arranging to equip said terminal so that the terminal is appropriate for the call.

First claim

A method of alerting a broadband user at a first terminal of an incoming multimedia call from a particular calling party comprising the steps of:
receiving input data at a broadband gateway of user preferences of calling parties, calling party locations, and terminal configuration data for a terminal normally utilized by the broadband user;
comparing the user preferences with data describing the incoming multimedia call;
if the terminal normally utilized by the user is not appropriate for the call, alerting the called user to one of moving to another terminal or arranging to equip said terminal so that the terminal is appropriate for the call.

18. Conference server for automatic x-way call port expansion feature

US6671262B1 | AT&T Corp

Bibliographic data

Publication date: 2003-12-30
Application date: 1999-12-30
Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, SANKALIA ANISH, WANG
                    SPENCER

CPC classification: H04L 65/4038, H04M 2203/5054, H04M 3/42059, H04M
                    3/42127, H04M 3/42297, H04M 3/561, H04M 3/562, H04M
                    3/568, H04M 7/0069, H04Q 2213/13034, H04Q 2213/1324,
                    H04Q 2213/13389, H04Q 3/0045

IPC classification: H04L 12/56, H04L 12/28, H04M 3/42, H04M 7/00, H04Q
                    3/00, H04M 3/56

External links: Google Patents, Espacenet, PatBase Express,
                    PatBase, Orbit
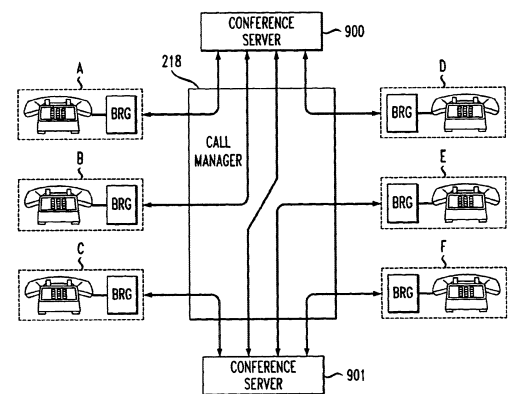
Abstract

A broadband communication system including an Internet Protocol Telephony Network and public switched telephone network. The system may include one or more conference servers for combining IP packet streams in a conference call into a combined IP packet stream, such that the combined IP packet stream utilizes no more bandwidth than each of the original IP packet streams. This allows the traffic volume coming from, and arriving at, each party to a conference call to remain essentially the same no matter how many parties are connected to the conference call. A plurality of the conference servers may be configured to interwork with each other so as to allow for a much larger conference call.

First claim

In an (IP) telephony network, a method for dynamically assigning conference call resources comprising the steps of:
receiving from a terminal a request for access to an existing conference call utilizing conference call resources of a first server;
receiving a first stream of a first plurality of IP packets from the terminal and a second stream of a second plurality of packets from a second terminal, each of the first and second streams utilizing an amount of bandwidth;
combining the first plurality of IP packets with the second plurality of IP packets to generate a third plurality of IP packets;
outputting the third stream of IP packets as a third stream of the third plurality of IP packets, the third stream utilizing an amount of bandwidth no greater than the amount of bandwidth utilized by either of the first and second streams;
determining whether the first server has sufficient conference call resources to process a future internet protocol (IP) packet stream from the terminal in connection with the conference call;
if the first server does not have sufficient conference call resources as determined in the step of determining, polling a second server to determine whether the second server has sufficient conference call resources to process the third IP packet stream from the first and second terminals in connection with the conference call;
if the second server has sufficient conference call resources as determined in the step of polling, instructing the terminal to direct the third IP packet stream to the second server, and instructing the first server and the second server to interwork with each other, thereby enabling the first and second terminals to be included in the existing conference call, and thereby eliminating a need for the conference call resources to be pre-scheduled.

19. Personal user network (closed user network) PUN/CUN

US6252952B1 | AT&T Corp

Bibliographic data

Publication date: 2001-06-26
Application date: 1999-12-30
Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, RUSSELL JESSE EUGENE, WALKER HOPETON, WANG SPENCER

CPC classification: H04M 15/49, H04M 15/56, H04M 15/745, H04M 15/8083, H04M 2203/2044, H04M 2215/0108, H04M 2215/0168, H04M 2215/0184, H04M 2215/202, H04M 2215/22, H04M 2215/46, H04M 3/44, H04M 7/1215, H04M 7/1255, H04M 7/126, H04M 7/128

IPC classification: H04M 15/00, H04M 7/00, H04M 3/44

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
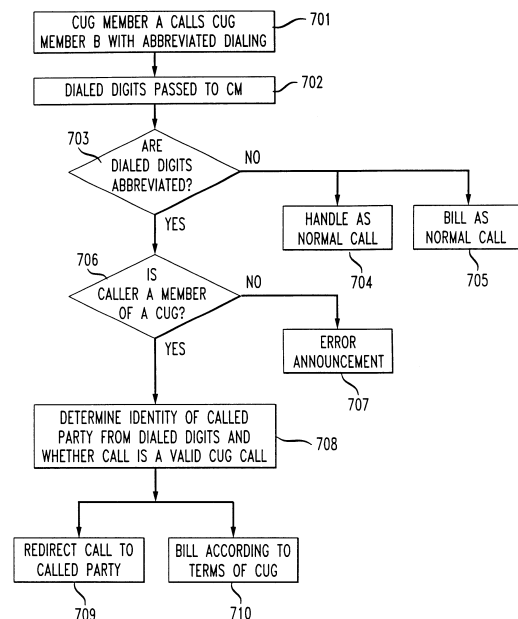
Abstract

An Internet Protocol Telephony Network and public switched telephone network, in which closed user groups may be dynamically defined and modified to take advantage of special billing within the closed user groups. Abbreviated dialing within the closed user groups may also be used to make dialing more convenient. The closed user groups may include members anywhere in a global network, and may take advantage of the special billing, regardless of whether the members are located in different states and/or countries.

First claim

In a broadband telephony network, a method for providing special billing to a closed user group of the broadband telephony network, the method comprising the steps of:
periodically receiving from an organization external to the broadband telephony network data representing either a current set of members of the organization or a difference between the current set of members and a prior set of members of the organization;
updating a database of the broadband telephony network according to the data;
establishing a call between at least two of the members;
determining whether the at least two members are each associated in the database with the organization;
if the at least two members are each listed in the database, billing the call at a rate different from a rate that would be used if the at least two members were not associated in the database with the organization.

20. System with call forward profile

US8666053B2 | Shoretel Inc

Bibliographic data

Publication date: 2014-03-04
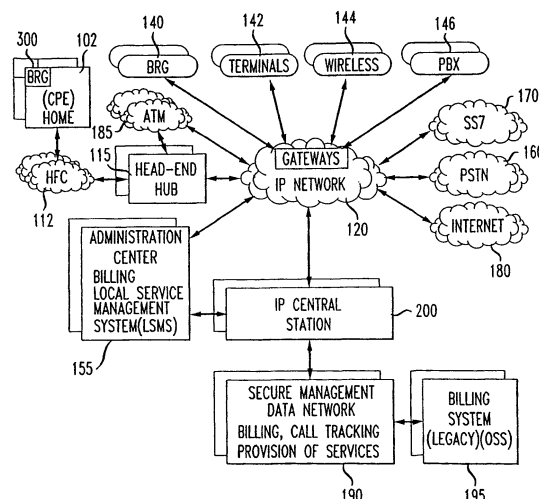Application date: 2011-10-21
Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, RUSSELL JESSE
              EUGENE, SANKALIA ANISH, WALKER
              HOPETON S, WANG SPENCER C

CPC classification: H04L 65/1096, H04M 3/54, H04M 7/006
IPC classification: H04M 3/42, H04M 7/00, H04M 3/54

External links: Google Patents, Espacenet, PatBase Express,
                  PatBase, Orbit

Abstract

A method and system for providing call forwarding in an IP telephone network is disclosed. First, when a telephone number for a first telephone from a second telephone is dialed, the call is routing to a call manager. Call setup procedures with a BRG responsible for the first telephone are then initiated. The BRG then checks stored call forwarding profiles to determine whether there is an active call forwarding profile for the first telephone. The call is connected to the first telephone if an active call forwarding profile is not found. However, if an active call forwarding profile is found, the call forwarding information is sent to the call manager. The call is routed to at least a third telephone based on the call forwarding information.

First claim

A method for forwarding at least voice over Internet Protocol (IP) calls, the method comprising:
dialing a first telephone from a second telephone, to make a voice over IP call;
setting up the voice over IP call by at least transmitting a data packet via an IP network to a call manager which ensures that adequate network resources are available to accommodate the call;
wherein the call manager comprises a resources database and a customer database, the customer database determining whether a telephone number is on or off the IP network;
the call manager checking stored call forwarding profiles to determine whether there is an active call forwarding profile for said first telephone;
connecting said voice over IP call to said first telephone if the active call forwarding profile is not found by said checking;
connecting the voice over IP call to a third telephone based on a call forwarding information, if the active call forwarding profile is found by said checking;
wherein the call forwarding information is comprised in the active call forwarding profile and is created by use of at least a display, and the display is not integral to a customer premises equipment that conforms to the signaling protocol SIP;
wherein a new call destination number is transmitted in another data packet;
wherein the call manager uses at least the new call destination number to connect the voice over IP call to the third telephone.

21. Automatic call manager traffic gate feature

US6570855B1 | AT&T Corp

Bibliographic data

Publication date: 2003-05-27
Application date: 1999-12-30
Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, SANKALIA ANISH, WANG SPENCER

CPC classification: H04L 65/80, H04M 15/41, H04M 15/56, H04M 15/8016, H04M 2215/0164, H04M 2215/202, H04M 2215/22, H04M 2215/7414, H04M 3/2263, H04M 3/367, H04M 7/006

IPC classification: H04M 3/22, H04M 7/00, H04M 3/36

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
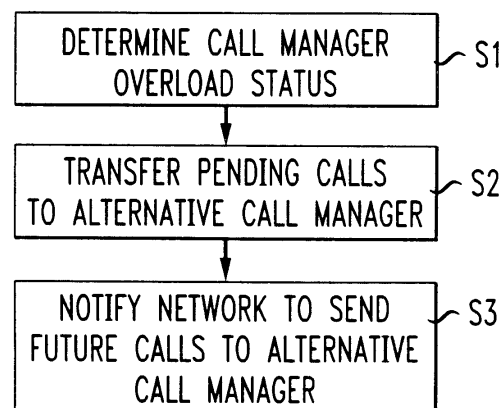
Abstract
A method of managing a call traffic includes determining when a load of a first call manager exceeds a predetermined load level, and ameliorating the load when the load exceeds the predetermined load level. The load is ameliorated by either notifying a network that future calls are to be directed to a second call manager, or transferring at least one pending call from the first call manager to a second call manager, or both.

First claim
Apparatus for use in an Internet Protocol (IP) telephony network operated by a service provider, the apparatus comprising
a first call manager adapted to communicate with customer premises equipment served by said network in order to carry out processing necessary for the set-up of voice calls over said IP network,
a second call manager adapted to communicate with customer premises equipment served by said network in order to carry out processing necessary for the set-up of voice calls over said IP network, and
call manager logic that, in response to a determination that the processing load of said first call manager in carrying out said processing has exceeded a predetermined load level, offloads at least a portion of the processing load of said first call manager to said second call manager,
the processing carried out by said first and second call managers including communicating messages to and from other equipment within said service-provider-operated IP telephony network.

22. Scaleable network server for low cost PBX

US6728239B1 | AT&T Corp

Bibliographic data

Publication date: 2004-04-27
Application date: 1999-12-30
Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, WALKER HOPETON,
                      WANG SPENCER

CPC classification: H04L 12/4604, H04L 12/5692, H04M 3/42314, H04M 7/1215,
                      H04M 7/125, H04Q 2213/13003, H04Q 2213/13034, H04Q
                      2213/13093, H04Q 2213/13106, H04Q 2213/13196, H04Q
                      2213/1322, H04Q 2213/13299, H04Q 2213/13389, H04Q
                      3/622
IPC classification: H04L 12/28, H04L 12/46, H04M 3/42, H04L 12/58, H04M
   7/00, H04Q 3/62

External links: Google Patents, Espacenet, PatBase Express,
                      PatBase, Orbit

Abstract

A scaleable PBX (Private Branch exchange) is provided for use in a powerful, facilities-based, broadband communications system that guarantees voice, data and video communication reliability and security to users for an multimedia system including integrated telephone, television and data network. The scaleable PBX includes one or more broadband gateways. Each broadband gateway may be provided on a slot card (i.e., broadband gateway card) compatible with servers and personal computers (PC). One or more slot cards may be include in a server to provide PBX feature/function capability to a broadband communication system. The server based broadband gateway PBX is scaleable for any size company or facility using, for example, one or more network servers. Alternatively, the broadband gateway card may be installed in a PC and provide a low cost small business or home PBX system.

First claim

A device providing PBX services in an integrated broadband communication system, including:
a server including a broadband gateway card coupled to a data bus of said server for providing customer premises PBX services, said broadband gateway card including:
at least one telephone interface coupled to a data bus;
a controller coupled to said data bus for controlling information traffic between said at least one telephone interface and said broadband communication system;
a memory coupled to said data bus; and
a transceiver coupled to said data bus for multiplexing and demultiplexing said information traffic between said broadband communication system and said broadband gateway card, wherein said transceiver is controlled by said controller and wherein said controller is coupled to a server data bus and operates as a slave to another controller.
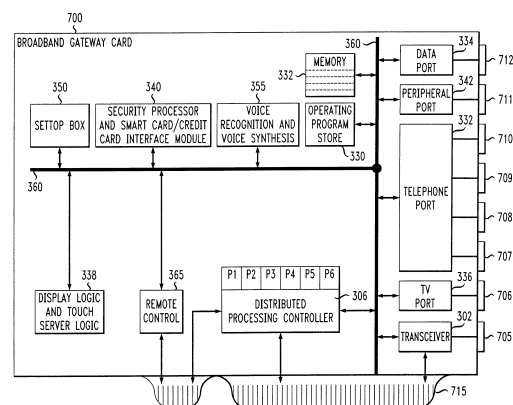
23. Integrated services director (ISD) overall architecture

US7376142B2 | AT&T Corp

Bibliographic data

Publication date: 2008-05-20
Application date: 2003-12-23
Earliest priority date: 1997-12-31

Inventors: GERSZBERG IRWIN, MILLER II ROBERT
                       RAYMOND, RUSSELL JESSE EUGENE,
                       WALLACE EDWARD L

CPC classification: H04M 1/2473, H04M 1/57, H04M 1/6505, H04N 7/141, H04Q
                       11/04, H04Q 2213/13039, H04Q 2213/13076, H04Q
                       2213/1309, H04Q 2213/13091, H04Q 2213/13093, H04Q
                       2213/13096, H04Q 2213/13103, H04Q 2213/13176, H04Q
                       2213/1319, H04Q 2213/13202, H04Q 2213/13204, H04Q
                       2213/13209, H04Q 2213/13216, H04Q 2213/13329, H04Q
                       2213/13292, H04Q 2213/13332, H04Q 2213/13337, H04Q
                       2213/13367, H04Q 2213/13377, H04Q 2213/13389

IPC classification: H04N 7/14, H04L 12/28, H04M 1/57, H04M 1/247, H04Q
                       11/04, H04M 1/65

External links: Google Patents, Espacenet, PatBase Express,
                       PatBase, Orbit

Abstract

A video enable answering machine having many new features including customized video announcement messages,
caller ID based video announcement messages, and time based video announcement messages.

First claim

A communication device disposed at a telephone customer premises, comprising:
a processor;
a digital subscriber line modem, connected to said processor, and further connected to a telephone network central
office by a twisted-pair wire connection;
one or more communication interfaces, connected to said processor, and further connected to a plurality of pieces of
customer premises equipment located at the telephone customer premises;
wherein said processor is configured to:
multiplex outgoing digital data from said plurality of pieces of customer premises equipment for transmission on said
twisted-pair wire connection by said digital subscriber line modem in a digital portion of a frequency spectrum of said
digital subscriber line modem;
facilitate communication from a first one of said plurality of pieces of customer premises equipment to a second one of
said plurality of pieces of customer premises equipment both the first and second pieces located at the same
telephone customer premises;
monitor a use status of one or more of said plurality of pieces of customer premises equipment; and
redirect incoming data traffic in accordance with said use status; and
an analog telephone connected to said digital subscriber line modem by a lifeline connection, whereby analog
telephone service may continue to be provided in the event of a power failure at the telephone customer premises.
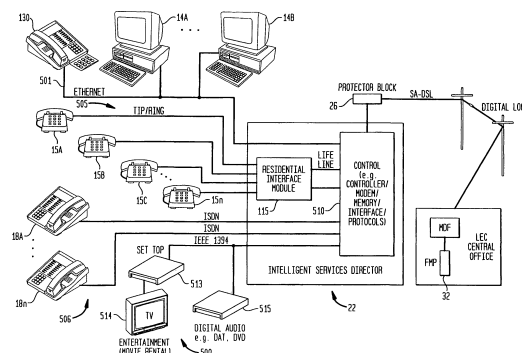
24. Anonymous call rejection

US6680935B1 | AT&T Corp

Bibliographic data

Publication date: 2004-01-20
Application date: 1999-12-30
Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, RUSSELL JESSE EUGENE, WANG SPENCER, WALKER HOPETON

CPC classification: H04M 2203/2005, H04M 2242/22, H04M 3/42042, H04M 3/42059, H04M 3/436, H04M 7/0033, H04M 7/1235, H04M 7/125, H04M 7/126

IPC classification: H04L 29/06, H04M 7/00, H04M 3/436

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
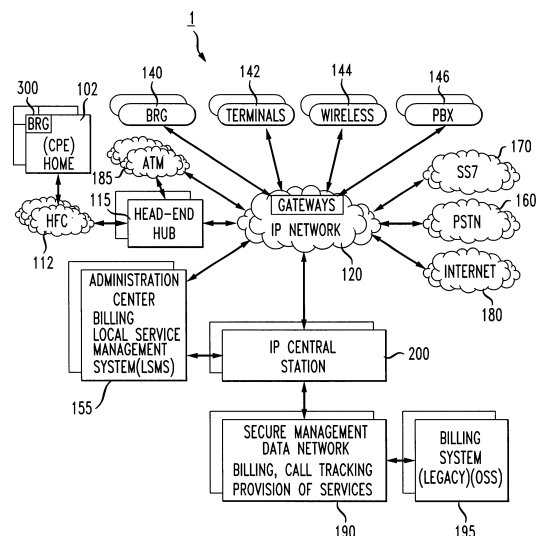
Abstract

The present invention provides a method, system and device/phone/computer for anonymous call rejection in an Internet Protocol telephony network. The method includes the steps of: determining whether a caller identification ID is available/identifiable for an incoming call; and rejecting the incoming call where the caller ID is unavailable or unidentifiable. The system includes a Caller Identification Unit, for determining whether a caller identification ID is available/identifiable for an incoming call and a Call Rejection Unit, coupled to the Caller Identification Unit, for rejecting the incoming call where the caller ID is unavailable or unidentifiable. A device/phone/computer of the invention provides a caller identification processing/rejecting unit and a transceiver. The caller identification processing/rejecting unit determines whether a caller identification ID is available or identifiable for an incoming call and rejects the incoming call where the caller ID is unavailable or unidentifiable. The transceiver is coupled to the caller identification processing/rejecting unit and is used for transmitting and for receiving calls when the caller ID is available or identifiable.

First claim

An internet protocol (IP) central station for use in a broadband network, said IP central station comprising
1) a plurality of gateways interfacing said IP central station to respective networks including the Internet, the public switched telephone network (PSTN), an SS7 signaling system, at least one wireless network and at least one packet network, said IP central station being configured to provide connectivity to said networks for customer premises equipment connected to said IP central station, said IP central station utilizing at least ones of said gateways to provide centralized system intelligence and control of voice and/or data IP packets communicated between said customer premises equipment and said networks, the gateways that interface said IP central station to the PSTN being operative to convert between IP-based voice packets and standard PSTN voice traffic, and between IP-based multimedia packets and standard PSTN traffic,
2) a plurality of servers, including
a) a system management server configured to provide monitoring and administrative functions for devices within said broadband network including management of various database functions, memory buffer functions, and software utility functions within said broadband network,
b) a call manager server providing centralized call control for
i) supporting call set-up and tear-down in said broadband network, including voice-over-IP calls,
ii) trunk and line information maintenance,
iii) call state maintenance for the duration of a call, and
iv) user service features execution, said call manager server being configured to respond to system events created by messages occurring during the processing of a call, said events including
call state changes,

call feature changes,

call feature triggering events, and

changes in the status of lines and trunks and error conditions, said call manager server including

an authentication server that provides authentication of devices, objects, packets and users so that a user may verify the identity of a called party,

a resources database that provides an identification of what resources are connected to the broadband network and their current state,

a trunk/gateway database that indicates which gateway serves what circuits in a trunk, and

a customer database which indicates whether a call is authorized, identifies what services a line supports and determines whether a telephone number communicates via IP,

c) an announcement service server that stores and send announcements to specified destinations via said gateways and also to said customer premises equipment, based on instructions received by said call manager server,

d) a dynamic host control protocol server,

e) a domain name service server operative in conjunction with said dynamic host control protocol server to dynamically assign IP addresses to devices in said customer premises equipment, and

3) a central router adapted to interconnect said servers and gateways utilizing high-speed, non-blocking IP and IP multicast Layer 3 switching and routing,

4) said call manager being adapted to provide call blocking services to at least one customer premises, said call blocking services including

a) determining whether a caller identification ID is available/identifiable for an incoming call,

b) providing a message for the caller when caller ID is unavailable/unidentifiable, said message informing the caller that the call is being rejected but informing the caller that

i) the call may be completed upon input of a predetermined passcode, and that

ii) the caller may identify him/herself and identification will be forwarded to the called party, allowing the called party the opportunity to accept the call, and that

iii) the caller may communicate with the called party via a facsimile telephone number, an email address or an alternate telephone number, each of which is stated in said message,

c) completing the call if the caller has input said passcode or if the caller has identified him/herself and the called party indicates a desire for the call to be completed, and

d) rejecting the call otherwise.

25. Integrated services director (ISD) overall architecture

US6424646B1 | AT&T Corp

Bibliographic data

Publication date: 2002-07-23
Application date: 1997-12-31
Earliest priority date: 1997-12-31

Inventors: GERSZBERG IRWIN, MILLER II ROBERT
RAYMOND, RUSSELL JESSE EUGENE,
WALLACE EDWARD L

CPC classification: H04L 12/14, H04L 12/2856, H04L 12/2881, H04M 1/247,
H04M 1/57, H04M 1/6505, H04N 21/42676, H04N 21/43632,
H04N 7/148, H04Q 11/04, H04Q 2213/13039, H04Q
2213/13076, H04Q 2213/13082, H04Q 2213/1309, H04Q
2213/13091, H04Q 2213/13093, H04Q 2213/13096, H04Q
2213/13103, H04Q 2213/13166, H04Q 2213/13176, H04Q
2213/1319, H04Q 2213/13202, H04Q 2213/13204, H04Q
2213/13209, H04Q 2213/13216, H04Q 2213/1329, H04Q
2213/13292, H04Q 2213/13332, H04Q 2213/13337, H04Q
2213/13367, H04Q 2213/13377, H04Q 2213/13389

IPC classification: H04N 7/14, H04L 12/28, H04M 1/57, H04M 1/247, H04Q
11/04, H04M 1/65

External links: Google Patents, Espacenet, PatBase Express,
PatBase, Orbit

Abstract

A video enable answering machine having many new features including customized video announcement messages,
caller ID based video announcement messages, and time based video announcement messages.

First claim

A telephone service method, comprising the steps of:

receiving incoming data for first and second pieces of customer premises equipment in a single multiplexed signal
from a telephone switch over a telephone connection;

demultiplexing said signal;

converting a first portion of said incoming data to a communications protocol of said first piece of customer premises
equipment;

transmitting said first portion of said incoming data to said first piece of customer premises equipment;

transmitting a second portion of said incoming data to said second piece of customer premises equipment, wherein
said steps of transmitting said first and second portions of said incoming data are performed in accordance with
priorities assigned to said first and second pieces of customer premises equipment;

assigning a first priority level to incoming transmissions;

assigning a second priority level to outgoing transmissions;

allocating the transmission capacity of said telephone connection according to said first and second priority levels.
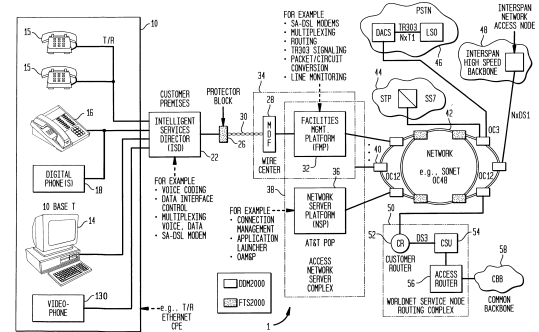
26. Toll-free service in an internet telephony system

EP1113677A2 | AT&T Corp

Bibliographic data

Publication date: 2001-07-04
Application date: 2000-12-22
Earliest priority date: 1999-12-30
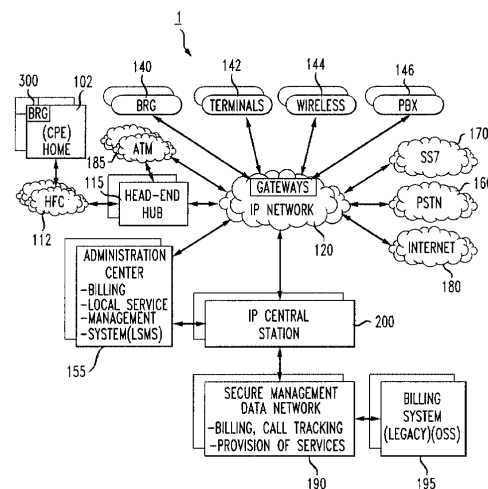
Inventors: KUNG FEN-CHUNG, RUSSELL JESSE
               EUGENE, SANKALIA ANISH, WALKER
               HOPETON, WANG SPENCER

CPC classification: H04Q 3/0025
IPC classification: H04Q 3/00

External links: Google Patents, Espacenet, EP Register,
                  PatBase Express, PatBase, Orbit

FIG. 1

Abstract

In an internet telephony system, toll-free service and the calls that are accepted and paid for can be specified by the IP telephony system user to be limited according to the calling party's identity, time of day, day of week or other criteria. Data that is used to screen or filter incoming calls is programmed into a call manager by the IP telephone system user's broadband residential gateway. Using such a system the user can carefully screen calls that are paid for and more closely control telecommunications service costs. More generally, the user has the ability to store predefined call handling criteria, which may be executed by the broadband residential gateway and/or the call manager.

First claim

In an internet telephony communications system, a method of providing communications service comprised of:
a. receiving call data at a call manager, said call data identifying a call source and a call destination;
b. analyzing said call data at said call manager to determine if said call to said destination is allowable according to a user predetermined criteria;
c. if said call to said destination is allowable, routing said call data to said destination through said internet telephony communications system to said destination.

27. Distributed local telephony gateway

US8532090B1 | 8X8 Inc

Bibliographic data

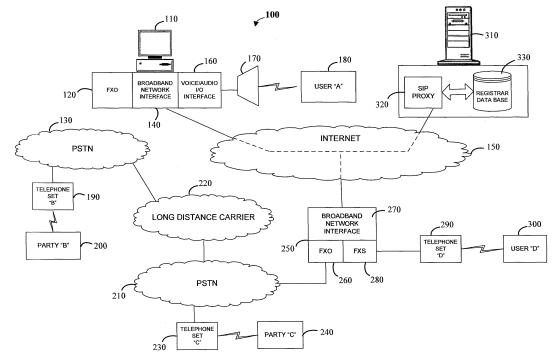Publication date: 2013-09-10
Application date: 2008-06-13
Earliest priority date: 2001-09-28

Inventors: PETIT-HUGUENIN MARC, DALMASSO ISABELLE, ANDREWS BARRY D, MARTIN BRYAN R

CPC classification: H04L 65/103, H04L 65/1073, H04M 7/1205
IPC classification: H04L 12/66

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract
Aspects of the invention are directed to a telephony system that is adapted to receive, route, process, and deliver communications data using a cost-effective, user-friendly operations platform and a broadband communication network. For example, the system includes a computer server arrangement and a plurality of endpoint devices communicatively coupled to one or more communication channels comprising an Internet protocol (IP) network. Packet-based (VoIP) calls are transmitted over an IP network, and translated to standard PSTN call signals when necessary. The broadband telephony system of the present invention utilizes each user's own IP network endpoint device as not only each user's local gateway onto the IP network, but also as a remote gateway for bridging other user's calls from the IP network to a local PSTN network in order to reach non-users.

First claim
An end-user device, comprising:
a telephony port in the end-user device for connecting to a local PSTN using a single line Foreign Exchange-Office (FXO) interface;
an audio interface in the end-user device configured and arranged to generate audible sounds in response to receiving audio communication data;
a packet-based interface in the end-user device for connecting to a packet-based network; and
a routing controller, configured and arranged in the end-user device, for
receiving, from the packet-based interface, audio communication data that includes an indication of a destination device,
providing, in response to determining that the end-user device corresponds to the destination device, the audio communication data to the audio interface,
in response to determining that the destination device corresponds to a destination device other than the end user device,
dialing the destination device using the telephony port and the single line;
communicating the audio communication data to the telephony port and over the single line FXO interface, and detecting an outgoing call from the audio interface and, in response thereto, applying a rule that dictates priority of the audio interface over audio communication data from the packet-based interface for connecting the outgoing call over the single line FXO interface.

28. Cooperative network for mobile internet access

US8996698B1 | Truphone Ltd

Bibliographic data

Publication date: 2015-03-31
Application date: 2000-11-03
Earliest priority date: 2000-11-03

Inventors: TAGG JAMES P

CPC classification: H04L 12/2856, H04L 12/4633, H04L 63/029, H04L 65/40, H04L 67/141, H04W 36/0022, H04W 36/0072, H04W 52/0216, H04W 76/12, H04W 8/02, H04W 84/042, H04W 84/12

IPC classification: G06F 15/16, H04L 12/56, H04L 12/28, H04L 29/06

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
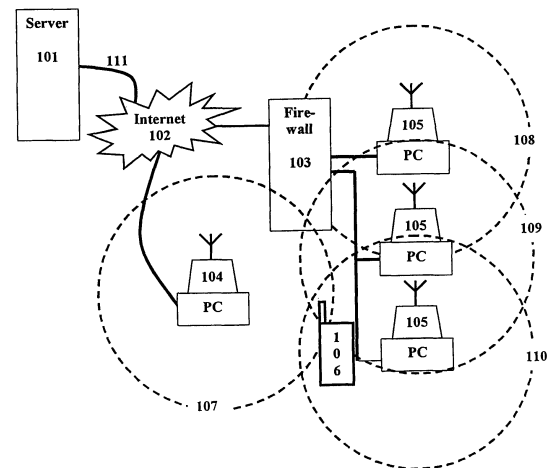
Abstract

A method and system for connecting mobile users to the Internet using cooperative interconnection. A node consists of a network element that has two connection methodologies—typically a node will have a radio link and a wired link to the Internet. To obtain a connection a member of the service locates themselves in proximity to a network node which is commonly provided by another member and the cooperative tunneling agent requests a secure link. All members of the service agree to give connection to the Internet upon request from another member.

First claim

A method of connecting a client system to a target network via a host system that has link capabilities for connecting to the target network comprising:

providing application software to a client system so the client system may act as a host or a client;

said application software being configured on said system that identifies said system as a member of a cooperative networking group;

connecting the client system to the host system via application software on a host system;

said host application software being configured to communicate with the application software on the client system that has the configured client application software that identifies the client system as a member of the cooperative networking group;

said host system being capable of accessing the target network;

linking the client system to the target network via a tunnel through the host system;

preventing the client system from accessing resources of the host system by the steps of:

enabling the host system's link capabilities for clients but directing those links to communicate with the host application software;

causing the client application software to intercept the communications of the client system directed to the target network, encapsulating them in a new packet and sending them to the host system;

wherein all packets sent by the client application software is directed to the host application software.

29. Methods, apparatus, and systems for accessing mobile and voice over IP telephone networks with a mobile handset

US7460525B2 | General Instrument Corp

Bibliographic data

Publication date: 2008-12-02
Application date: 2002-07-02
Earliest priority date: 2001-07-06

Inventors: MOORE JR RICHARD

CPC classification: H04L 12/66, H04L 2012/5603, H04M 1/2535, H04W 40/02, H04W 48/18, H04W 74/00, H04W 88/06

IPC classification: H04M 11/00, H04L 12/56, H04L 12/28, H04L 12/66, H04W 80/00, H04M 3/00, H04W 24/00, H04W 40/02, H04W 48/18, H04M 1/253, H04W 74/00, H04M 1/725

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
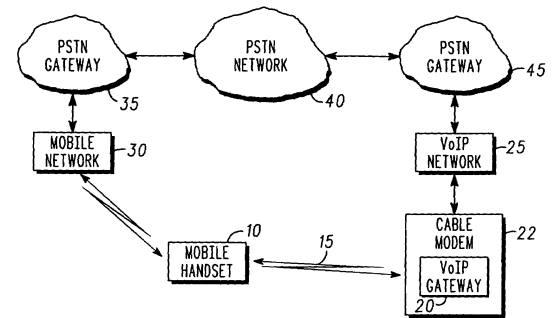
Abstract

Methods, systems, and apparatus are provided to enable access to mobile and voice over IP (VoIP) telephone networks with a mobile handset. A VoIP gateway for the VoIP telephone network is provided. A cable modem allows communication between the handset and the VoIP telephone network via the VoIP gateway. A local network connects the handset to the VoIP gateway. The mobile handset determines whether it is within range of the local network. If the handset is within the range of the local network, data traffic may be routed to and from the handset via the VoIP telephone network. If the handset is outside of the range of the local network, data traffic may be routed to and from the handset via the mobile telephone network. The data traffic may comprise telephony data traffic and/or Internet protocol (IP) data traffic.

First claim

A method for accessing mobile and voice over Internet Protocol (VoIP) telephone networks with a mobile handset, comprising the steps of:
determining whether the mobile handset is within range of a local network of a VoIP gateway of a VoIP telephone network;
if said handset is within the range of the local network, routing data traffic to and from said handset via the VoIP telephone network;
if said handset is outside of the range of the local network, routing data traffic to and from said handset via the mobile telephone network.

30. Broadband virtual private network VPN with enterprise wireless communication system and method for virtual home or business environment VHE

EP1267524B1 | AT&T Corp

Bibliographic data

Publication date: 2008-04-02
Application date: 2002-06-12
Earliest priority date: 2001-06-14

Inventors: CHOW ALBERT T, MILLER ROBERT R,
                       RUSSELL JESSE E, YING WENCHU, KIM
                       JINMAN, ERVING RICHARD H

CPC classification: H04L 12/2801, H04M 2207/20, H04W 7/0069, H04W 4/00,
                       H04W 74/00, H04W 76/10, H04W 76/30, H04W 88/06, H04W
                       92/02
IPC classification: H04L 12/56, H04L 12/28, H04L 29/06, H04M 7/00

External links: Google Patents, Espacenet, EP Register,
                       PatBase Express, PatBase, Orbit

Abstract
The present invention sets forth a network-centric service distribution architecture and method that integrates a wireless access system/service in the residence, SOHO, business or public environment through the use of a local broadband network, such as a Residential-Business Broadband Network (RBN), to the service provider's broadband transport network and to a service provider's broadband packet network that facilitates end-to-end packet telecommunication services. The Media Terminal Adapter is coupled via the RBN to the access port(s) and via the service provider's broadband transport network to the service provider's broadband packet network. The access port is coupled to the Media Terminal Adapter via either a RBN (e.g., a Local Area Network - LAN) or simply via a traditional POTS line interface. The access port receives and sends wireless signals to a plurality of RBN devices, allowing the user to control theses devices remotely from the residence, business, SOHO or public environments. The integration of an RBN to a service provider's broadband packet network allows a subscriber to communicate at home and at the office with one communication device anytime anywhere. A service provider can deploy services in an integrated voice, data and multimedia environment cost effectively based on one broadband packet network.

First claim
A method for providing network-centric service distribution to a plurality of local wireless devices (118) at an enterprise location, the method comprising the steps of:
providing a wireless access service in a local ResidentialBusiness Broadband Network at the enterprise location through use of a broadband packet network (106) that facilitates end-to-end packet telecommunication services and a broadband transport network (120) that is coupled between the broadband packet network and the enterprise location the local ResidentialBusiness Broadband Network supporting communication among the plurality of local wireless devices, as well as supporting communication between said plurality of local wireless devices and the broadband packet network (106);
providing a Media Terminal Adapter (104) coupled to at least one access port (102) to receive and send wireless signals to a plurality of wireless RBN devices in accordance with call and service termination functions, the Media Terminal Adapter providing access functions for connecting said broadband packet network (106) to the local Residential/Business Broadband Network via the broadband transport network, the Media Terminal Adapter (104) supporting telephony interworking among TlNEIA-136 standards, Enhanced Data for Global Evolution/General Packet Radio Service standards, IEEE 802.11b standards and IEEE 802.15 standards;
controlling and administering, via the broadband packet network (106), operations of the access port (102) and service requests of the plurality of local wireless devices associated therewith via a Network Service Platform (108) coupled to the broadband packet network (106);
delivering packet telephony service via a private branch exchange (110) in communication with the Media Terminal

Adapter (104) of the Residential/Business Broadband Network and via the service provider's broadband transport network and the service provider's broadband packet network via the broadband transport network and Media Terminal Adapter (104).

31. Broadband network with enterprise wireless communication system for residential and business environment

US7002995B2 | AT&T Corp

Bibliographic data

Publication date: 2006-02-21
Application date: 2001-06-14
Earliest priority date: 2001-06-14

| Inventors: | CHOW ALBERT T, ERVING RICHARD HENRY, KIM JINMAN, MILLER ROBERT RAYMOND II, RUSSELL JESSE E, YING WENCHU |

CPC classification: H04L 12/2801, H04L 61/106, H04M 7/0069, H04W 4/00, H04W 74/00, H04W 76/10, H04W 84/045, H04W 84/12, H04W 88/10, H04W 88/16, H04W 92/02, H04W 92/12

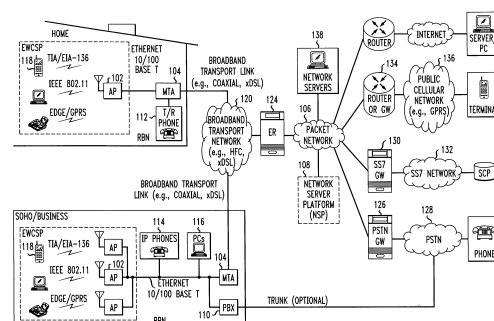IPC classification: H04L 12/56, H04L 12/28, H04J 1/00, H04M 7/00

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

The present invention sets forth a network-centric service distribution architecture that integrates a wireless access system in the residence, SOHO, business or public environment through the use of a local broadband network, such as a Residential-Business Broadband Network (RBN), to the service provider's broadband transport network and to a service provider's broadband packet network. The system includes a Media Terminal Adapter coupled via the RBN to the access port(s) and via the service provider's broadband transport network to the service provider's broadband packet network. The access port is coupled to the Media Terminal Adapter via either an RBN (e.g., a Local Area Network—LAN) or simply via a traditional POTS line interface. The access port receives and sends wireless signals to a plurality of RBN devices, allowing the user to control these devices remotely from the residence, business, SOHO or public environments. The integration of an RBN to a service provider's broadband packet network allows a subscriber to communicate at home and at the office with one communication device anytime anywhere.

First claim

A network-centric service distribution architecture that integrates a wireless access service in a local Residential/Business Broadband Network (RBN) environment through the use of a local RBN to a service provider's broadband transport network and to a service provider's broadband packet network that facilitates end-to-end packet telecommunication services, wherein the RBN of the network-centric service distribution architecture comprises:
a Media Terminal Adapter, coupled to at least one access port (AP) and to the service provider's broadband transport network, for providing access functions for connecting the service provider's broadband packet network via the service provider's broadband transport network with the RBN, the at least one access port, coupled to the Media Terminal Adapter, arranged to receive and send wireless signals to a plurality of wireless RBN devices, supporting telephony interworking among TIA/EIA-316 handsets, EDGE/GRPS handsets and IEEE 802.11b devices;
a Network Server Platform (NSP), coupled to the service provider's broadband packet network, for controlling and administering operations and services of the access port and the plurality of wireless RBN devices associated therewith; and
a private branch exchange (PBX) coupled to the Media Terminal Adapter and, in turn, to the service provider's broadband transport network and to the service provider's broadband packet network for delivery of packet telecommunications services.

32. ISD WIRELESS NETWORK

US20020068562A1 | AT&T Corp

Bibliographic data

Publication date: 2002-06-06
Application date: 1997-12-31
Earliest priority date: 1997-05-01

Inventors: GERSZBERG IRWIN, MARTIN JEFFREY S, MILLER ROBERT RAYMOND, WALKER HOPETON S, WALLACE EDWARD L, JAVITT JOEL I

CPC classification: H04B 7/155, H04M 1/57, H04M 1/725, H04W 84/10
IPC classification: H04W 84/10, H04M 3/00, H04B 10/20, H04M 1/57, H04M 1/725, H04M 1/247, H04B 7/155

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A cordless telephone network for wirelessly linking with a wireless phone. The cordless telephone network may include a plurality of wireless base stations, the base stations preferrably being disposed at customer premises such as private residences and/or businesses. A wireless phone linked to the cordless telephone network may roam between the wireless base stations and/or between the cordless telephone network and any other wireless network such as a conventional cellular phone network.

First claim

A 900 MHz roaming phone.
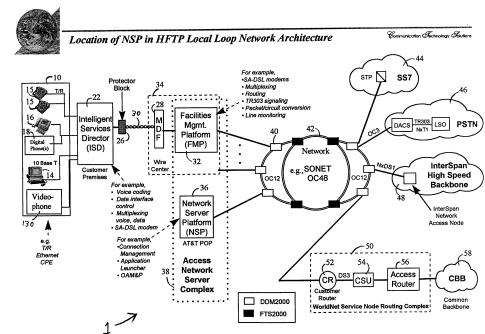
33. System and method for managing multimedia communications across convergent networks

US9338190B2 | AIP Acquisition LLC

Bibliographic data
Publication date: 2016-05-10
Application date: 2012-07-03
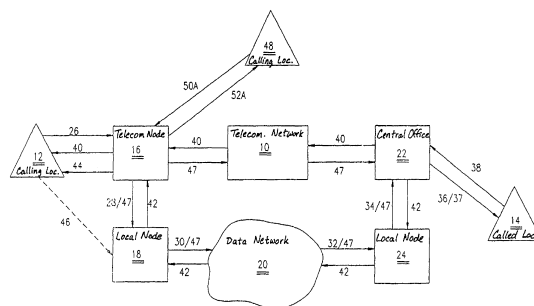Earliest priority date: 1994-10-11

Inventors: ENG CHI, HEAP STEVEN, MASHINSKY ALEXANDER, KIM ROGER

CPC classification: H04L 43/0829, H04L 43/087, H04L 43/0876, H04L 45/00, H04L 45/302, H04L 65/1069, H04L 65/80
IPC classification: H04W 4/00, H04L 12/26, H04L 12/66, H04L 29/06, H04B 14/06, H04L 12/725, H04L 12/701

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract
A method and device that interrogates the availability of a called party before placing a communication from the calling party to the called party. A callback may be initiated so that both communications are completed simultaneously. The routing of communication may take place through any one of a number of different networks and at another time of the day, even if the caller does not otherwise have access to those networks.

First claim
A method for communication between two access devices via one or more networks, comprising the steps:
receiving a transmission in a first format through a first communication network from a first access device of a calling party, the transmission comprising a signaling message for one of establishing and transmitting voice communication for a phone call in one of a digital telephone network, an analog telephone network, and a cellular network from the calling party to a called party;
performing a first conversion converting the transmission from the first format to a second format, the second format being Internet protocol (IP);
sending the converted transmission through a second communication network, the second communication network being a data network, for reception by a second access device of the called party,
performing a second conversion further converting the converted transmission from the second format to a further format suitable for the second access device,
wherein each respective one of the first access device and the second access device comprises one of a telephone, a pager, a cellular phone, a laptop, a facsimile machine, and a multimedia workstation and said further format comprises said first format or another telecommunication protocol, and
optimizing routing of a multimedia communication between access devices, the optimizing including:
determining, by a control node, a quality of each IP network of a plurality of IP networks connected to the control node;
creating, by the control node, a quality matrix including the determined quality for the each IP network;
setting up, by the control node, a media session between an originating access device and a receiving access device across a plurality of communications networks having different communications protocols including Internet protocol (IP);
upon successful setup of the media session, routing by the control node the multimedia communication between the originating and receiving access devices along a select path through at least a portion of one of the IP networks based on the quality matrix.

34. Method for the recognition and operation of virtual private networks (VPNs) over a wireless point to multi-point (PtMP) transmission system

US6680922B1 | Intellectual Ventures I LLC

Bibliographic data

Publication date: 2004-01-20
Application date: 1999-07-09
Earliest priority date: 1998-07-10

Inventors: JORGENSEN JACOB W

CPC classification: H04L 1/20, H04L 12/1827, H04L 12/1836, H04L 12/1881, H04L 12/189, H04L 47/193, H04L 47/27, H04L 63/0272, H04L 63/0428, H04L 69/161, H04L 69/163, H04L 69/165, H04L 69/169, H04Q 11/0414, H04Q 2213/1305, H04Q 2213/13096, H04Q 2213/13097, H04Q 2213/13098, H04Q 2213/13141, H04Q 2213/13166, H04Q 2213/13176, H04Q 2213/13196, H04Q 2213/13204, H04Q 2213/13216, H04Q 2213/1322, H04Q 2213/13292, H04Q 2213/13296, H04Q 2213/13348, H04Q 2213/13389, H04W 28/0273, H04W 28/20, H04W 28/24, H04W 28/26, H04W 72/1247, H04W 8/04, H04W 80/00, H04W 88/06

IPC classification: H04W 72/04, H04L 12/56, H04L 12/28, H04W 72/12, H04W 80/00, H04W 88/06, H04L 29/08, H04L 29/06, H04L 1/20, H04W 28/24, H04Q 11/04, H04W 28/06, H04L 12/18, H04W 28/20, H04W 28/26
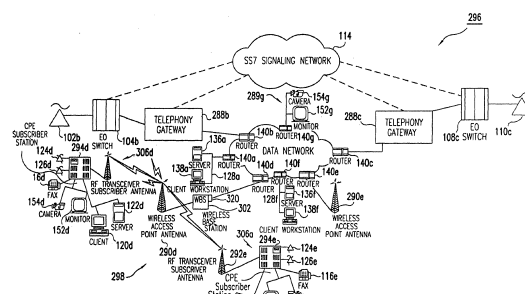
External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A packet-centric wireless point to multi-point telecommunications system includes a wireless base station coupled to a first data network; one or more host workstations coupled to the first data network; one or more subscriber customer premise equipment (CPE) stations in wireless communication with the wireless base station over a shared wireless bandwidth using a packet-centric protocol; and one or more subscriber workstations coupled to each of the subscriber CPE stations over a second network; resource allocator optimizing end-user quality of service (QoS) and allocating shared bandwidth among the subscriber CPE stations; a scheduler to schedule an internet protocol (IP) flow over the shared wireless bandwidth. The scheduler includes a prioritizer for prioritizing the IP flow based on priorities of a virtual private network (VPN). The system can include an analyzer for analyzing the virtual private network (VPN) priorities for the IP flow, or for prioritizing all VPN IP flows. The system can include a prioritizer to prioritize the IP flow based on one or more subscriber-defined parameters. In the system, the VPN can include a directory enabled networking (DEN) table management scheme. The VPN can be implemented using a point-to-point tunneling protocol (PPTP). Also included is a method for accomplishing the above.

First claim

A packet-centric wireless point to multi-point telecommunications system comprising:

a wireless base station coupled to a first data network;

one or more host workstations coupled to said first data network;

one or more subscriber customer premise equipment (CPE) stations in wireless communication with said wireless base station over a shared wireless bandwidth using a packet-centric protocol; and

one or more subscriber workstations coupled to each of said subscriber CPE stations over a second network;

resource allocation means for optimizing end-user quality of service (QoS) and allocating said shared wireless bandwidth among said subscriber CPE stations, wherein said resource allocation means is application aware, and wherein said application awareness comprises awareness of at least one layer above layer 4 of Open Systems Interconnect (OSI) model; and

means for analyzing and scheduling an internet protocol (IP) flow over said shared wireless bandwidth, wherein said scheduling means comprises:

prioritization means for prioritizing said IP flow in comparison to other IP flows based on priorities of a virtual private

network (VPN) associated with said IP flow.

35. Application for a voice over IP (VoIP) telephony gateway and methods for use therein

Bibliographic data
Publication date: 2003-12-16
Application date: 2001-09-21
Earliest priority date: 1999-11-10

Inventors: THORNTON TIMOTHY R, BHATIA RAJIV, SUH
                         KI CHOON, CHEN CHENG

CPC classification: H04L 12/1403, H04L 12/1439, H04L 12/145, H04L 12/1482,
                         H04L 12/1485, H04L 12/5692, H04L 12/66, H04L 43/0829,
                         H04L 43/087, H04L 43/16, H04L 65/103, H04L 65/104, H04L
                         65/1069, H04L 65/80, H04L 67/14, H04L 69/329, H04M
                         15/56, H04M 15/8016, H04M 15/8044, H04M 2215/202,
                         H04M 2215/42, H04M 2215/7414, H04M 2215/745, H04M
   7/0069, H04M 7/122, H04M 7/125, H04M 7/1295

IPC classification: H04L 12/28, H04L 12/26, H04L 12/66, H04L 29/08, H04M
                         15/00, H04L 29/06, H04M 7/00, H04L 12/14

External links: Google Patents, Espacenet, PatBase Express,
                         PatBase, Orbit

Abstract
Apparatus, and accompanying methods for use therein, for a telephony gateway intended for use, e.g., paired use, at opposite ends of a data network connection, in conjunction with at each end, e.g., a private branch exchange (PBX) for automatically routing telephone calls, e.g., voice, data and facsimile, between two peer PBXs over either a public switched telephone network (PSTN) or a data network, based on, among other aspects, cost considerations for handling each such call and called directory numbers, monitoring quality of service (QoS) then provided through the data network and switching ("auto-switching") such calls back and forth between the PSTN and the data network, as needed, in response to dynamic changes in the QoS such that the call is carried over a connection then providing a sufficient QoS.

First claim
A protocol for use with a telephony gateway which routes a telephone call through either a public switched telephone network (PSTN) or a data network to a peer telephony gateway, the protocol comprising:
a plurality of H.323 messages which collectively convey call-specific data for the call then being routed between the telephony gateway and the peer gateway, wherein the data is carried through call independent signaling features of the messages and resides within nonstandard data fields in the messages, the data having flags and a call identifier, the call identifier being associated with and uniquely identifying the call and the flags indicating to the telephony gateway and the peer gateway whether the call can be automatically switched back and forth between the PSTN and the data network.
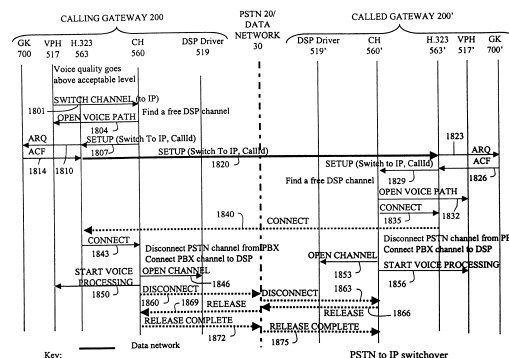
36. Method and computer program product for internet protocol (IP)-flow classification in a wireless point to multi-point (PtMP) transmission system

US7251218B2 | Van Drebbel Mariner LLC

Bibliographic data

Publication date: 2007-07-31
Application date: 2002-10-24
Earliest priority date: 1998-07-10

Inventors: JORGENSEN JACOB W

CPC classification: H04L 1/20, H04L 12/189, H04L 47/193, H04L 47/27, H04L 63/0272, H04L 65/80, H04L 69/161, H04L 69/163, H04L 69/165, H04L 69/169, H04Q 11/0414, H04Q 2213/1305, H04Q 2213/13096, H04Q 2213/13097, H04Q 2213/13098, H04Q 2213/13141, H04Q 2213/13166, H04Q 2213/13176, H04Q 2213/13196, H04Q 2213/13204, H04Q 2213/13216, H04Q 2213/1322, H04Q 2213/13292, H04Q 2213/13296, H04Q 2213/13348, H04Q 2213/13389, H04W 12/02, H04W 28/0263, H04W 28/0273, H04W 28/20, H04W 28/24, H04W 28/26, H04W 72/1242, H04W 8/04, H04W 80/06

IPC classification: G06F 15/16, H04W 72/04, H04L 12/56, H04L 12/28, H04W 72/12, H04W 80/00, H04W 88/06, H04W 24/00, H04L 1/20, H04W 28/24, H04Q 11/04, H04W 28/06, H04L 12/18, H04W 80/06, H04W 28/20, H04W 28/26, H04L 47/27

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A system and method for Internet Protocol (IP) flow classification group IP flows in a packet-centric wireless point to multi-point telecommunications system is disclosed. The method comprises analyzing an IP flow in a packet-centric manner, classifying the IP flow, scheduling the IP flow for transmission over a shared wireless bandwidth between a wireless base station and at least one subscriber customer premises equipment (CPE) station, allocating the shared wireless bandwidth to a communication of the IP flow between the wireless base station and a subscriber CPE station so as to optimize end-user quality of service (QoS) associated with the IP flow.

First claim

A method for IP flow classification grouping IP flows in a packet-centric wireless point to multi-point telecommunications system, said method comprising:
analyzing an Internet Protocol (IP) flow in a packet-centric manner;
classifying said IP flow;
scheduling said IP flow for transmission over a shared wireless bandwidth between a wireless base station and at least one subscriber customer premises equipment (CPE) station, including
allocating said shared wireless bandwidth to communication of said IP flow between said wireless base station and a subscriber CPE station, so as to optimize end-user quality of service (QoS) associated with said IP flow.
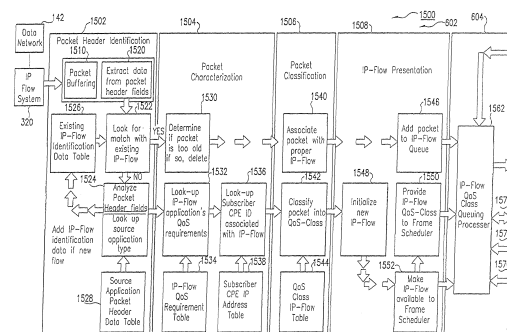
37. Distributed telecommunication network

| Cisco Technology Inc

Bibliographic data
Publication date: 2010-05-04
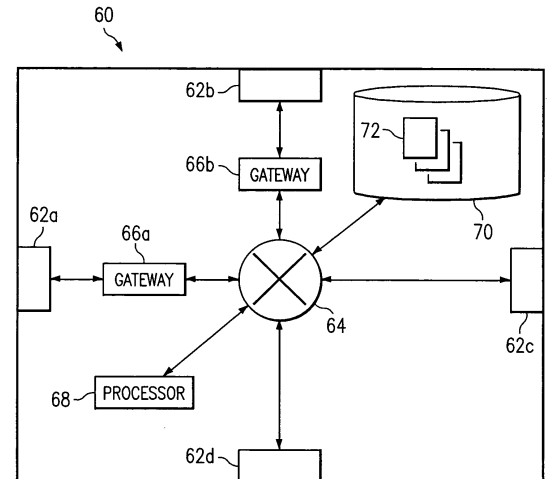Application date: 2005-03-18
Earliest priority date: 2001-04-12

Inventors: MOON BILLY G, MELTON ROGER B

CPC classification: H04M 7/006, H04M 7/009
IPC classification: H04M 7/00, H04L 12/64

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract
A telecommunication device includes a first interface coupled to the public switched telephone network (PSTN) in a first local calling area, a second interface coupled to a packet network, and a third interface coupled to a first plain old telephone system (POTS) telephony device. The device also includes a router that directs telecommunications between the first, second, and third interfaces and a gateway that enables telecommunications between the first POTS telephony device and the packet network. Furthermore, the device includes a processor that receives signaling from the first POTS telephony device indicating a desire to establish telecommunications with a second POTS telephony device coupled to the PSTN in a second local calling area and coupled to the packet network. The processor determines whether the telecommunication device has an appropriate amount of associated credit to use the packet network to establish telecommunications between the first and second POTS telephony devices and, if so, establishes telecommunications between the first and second POTS telephony devices using the packet network such that the first and second POTS telephony devices may communicate without using a long distance network coupling the first and second local calling areas.

First claim
A telecommunication device, comprising:
a first interface coupled to the public switched telephone network (PSTN) in a first local calling area;
a second interface coupled to a packet network;
a third interface coupled to a first plain old telephone system (POTS) telephony device;
a router coupling the first, second, and third interfaces and operable to direct telecommunications between the first, second, and third interfaces;
a gateway operable to enable telecommunications between the first POTS telephony device and the packet network; and
a processor operable to:
receive signaling from the first POTS telephony device indicating a desire to establish telecommunications with a second POTS telephony device coupled to the PSTN in a second local calling area and coupled to the packet network;
determine whether the telecommunication device has an appropriate amount of associated credit to use the packet network to establish telecommunications between the first and second POTS telephony devices; and
establish telecommunications between the first and second POTS telephony devices using the packet network such that the first and second POTS telephony devices may communicate without using a long distance network coupling the first and second local calling areas.

38. Protected IP telephony calls using encryption

US6889321B1 | AT&T Corp

Bibliographic data

Publication date: 2005-05-03
Application date: 1999-12-30
Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, RUSSELL JESSE EUGENE, WALKER HOPETON, WANG SPENCER

CPC classification: H04L 63/0281, H04L 63/0464, H04L 63/083, H04L 65/1043, H04L 65/1069, H04L 65/1096, H04M 7/0078, H04M 7/125, H04Q 2213/13034, H04Q 2213/13103, H04Q 2213/13106, H04Q 2213/13204, H04Q 2213/13248, H04Q 2213/13332, H04Q 2213/13339, H04Q 2213/13383, H04Q 2213/13389, H04Q 3/0025

IPC classification: H04L 9/00, H04L 29/06, H04N 7/167, H04M 7/00, H04Q 3/00

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
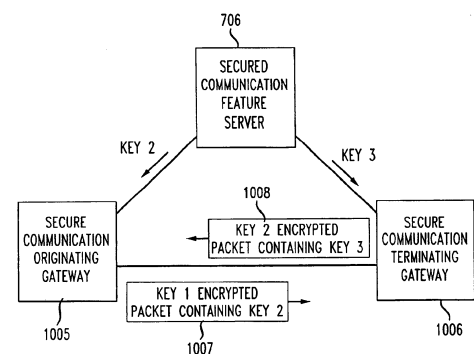
Abstract

Communication information transmitted in the broadband communication system may be in a packet format and secured using encryption techniques, for example encryption software, including a means for providing an initial security key and updated security keys to the various pieces of communication equipment located throughout the broadband communication system. When communication equipment, for example a gateway, is first registered with, for example, an IP central station, the IP central station assigns an initial encryption key to the gateway that is assigned and retained by a server, for example a call manager server, and the gateway (e.g., broadband residential gateway). This initial encryption key may be used to establish a secure two way communication between two pieces of communication equipment as an originating point communication equipment and a terminating point communication equipment.

First claim

A method for securing a communication comprising the steps of:
assigning a first confidential key at a network server and transmitting said first confidential key to an originating subscriber gateway located at a customer premises,
transmitting said first confidential key from said originating subscriber gateway to a terminating subscriber gateway located at a customer premises in advance of or simultaneous with a first encrypted data packet, said first encrypted data packet being encrypted with said first confidential key, and
exchanging packets encrypted via said first confidential key between said originating and said terminating subscriber gateway.

39. System, method, and base station using different security protocols on wired and wireless portions of network

US7496674B2 | Van Drebbel Mariner LLC

Bibliographic data

Publication date: 2009-02-24
Application date: 2006-08-10
Earliest priority date: 1998-07-10

Inventors: JORGENSEN JACOB W

CPC classification: H04L 1/20, H04L 12/1813, H04L 12/1836, H04L 12/189,
                       H04L 63/0272, H04L 69/161, H04L 69/163, H04L 69/165,
                       H04L 69/168, H04L 69/169, H04Q 11/0414, H04Q
                       2213/1305, H04Q 2213/13096, H04Q 2213/13097, H04Q
                       2213/13098, H04Q 2213/13141, H04Q 2213/13166, H04Q
                       2213/13176, H04Q 2213/13196, H04Q 2213/13204, H04Q
                       2213/13216, H04Q 2213/1322, H04Q 2213/13292, H04Q
                       2213/13296, H04Q 2213/13348, H04Q 2213/13389, H04W
                       24/00, H04W 28/20, H04W 28/24, H04W 28/26, H04W 48/12,
                       H04W 72/04, H04W 72/0453, H04W 74/00, H04W 80/04,
                       H04W 80/06, H04W 84/06

IPC classification: G06F 15/16, H04W 72/04, H04L 12/56, H04L 12/28, H04W
                       80/00, H04W 88/06, H04L 29/06, H04W 84/06, H04L 1/20,
                       H04W 28/24, H04W 74/00, H04Q 11/04, H04W 28/06, H04L
                       12/18, H04W 80/06, H04W 28/20, H04W 28/26

External links: Google Patents, Espacenet, PatBase Express,
                       PatBase, Orbit

Abstract

A method for providing quality of service (QoS) aware, wireless point to multi-point telecommunications in a telecommunications system. The telecommunications system includes: a wireless base station coupled to a first data network; one or more host workstations coupled to the first data network; one or more subscriber customer premise equipment (CPE) stations in wireless communications with the wireless base station over a shared bandwidth using a packet-centric protocol; one or more subscriber workstations coupled to each of the subscriber CPE stations over a second network. The method includes allocating shared bandwidth among the subscriber CPE stations in a manner to optimize end-user QoS. The method includes analyzing and scheduling IP flows over the shared wireless bandwidth. This includes identifying the IP flows; characterizing the IP flows; classifying the IP flows; and prioritizing the IP flows.

First claim

A method comprising:

receiving a first packet from a wired data network in a wireless base station that is coupled to the wired data network, wherein the first packet is protected according to a first security protocol on the wired data network, and wherein a target device of the first packet communicates with a source of the first packet, at least in part, over a wireless network on which the wireless base station communicates;

processing the first packet in the wireless base station according to the first security protocol;

determining that the first packet is targeted at the target device, wherein the determining is performed by the wireless base station, and wherein the first packet comprises a header coded with address information identifying the target device;

applying a second security protocol employed on the wireless network to the first packet, wherein the second security protocol is different from the first security protocol, and wherein the applying is performed in the wireless base station.
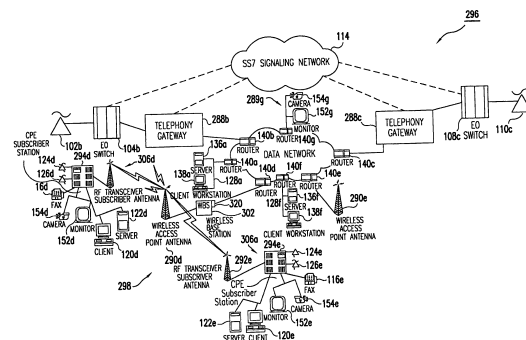
40. Private IP communication network architecture

US7215663B1 | C2 Global Technologies Inc

Bibliographic data

Publication date: 2007-05-08
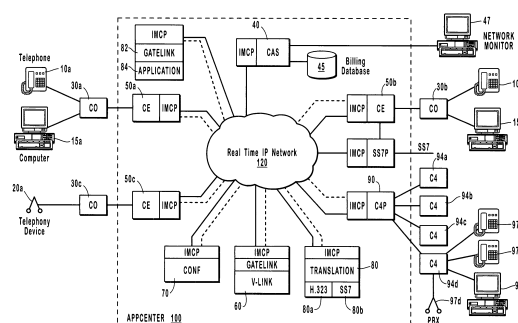Application date: 2000-09-06
Earliest priority date: 1996-01-16

Inventors: RADULOVIC ALEX

CPC classification: H04L 12/14, H04L 12/66, H04L 47/15, H04L 47/2416, H04L 47/70, H04L 47/781, H04L 47/801, H04L 47/803, H04M 7/1205

IPC classification: H04L 12/56

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A disclosed Internet Linked Network Architecture delivers telecommunication type services across a network utilizing digital technology. The unique breadth and flexibility of telecommunication services offered by the Internet Linked Network Architecture flow directly from the network over which they are delivered and the underlying design principles and architectural decisions employed during its creation. The present invention supports current telecommunication and voice over IP standards and applications. This new network not only replaces the telecommunication network presently in place, but it also offers a more feature rich and cost effective alternative. For example, traditional telecommunication switches are more expensive, less reliable and slower than the faster digital data switches utilized in the present invention. Furthermore, the programmable nature of the digital devices comprising the present invention allows the new network to be built with a scalable and extensible architecture, providing the flexibility necessary to incorporate new or future digital enhancements. The inventive network is designed as a complete replacement for the traditional telecom network. The disclosed architecture allows for this network to connect to traditional networks and allows for an upgrade path. The design is robust and scalable so this network can introduce new features and functionality while preserving the quality of traditional networks.

First claim

In a dispersed Internet protocol network that supplies communication and data services across components that are electrically attached to a central arbitration server, a method of allowing communication applications to modify call detail records for services rendered on a per record basis by providing generic fields that allow the central arbitration server to collect billing information for any application without having to anticipate it, the method comprising:
the step of initiating a control path connection on a network layer between individual components attached to the dispersed network and at least one central arbitration server for centralized arbitration of service requests received from the individual components;
the step of receiving a service request;
the step of initiating a data path connection between the individual components designated by the service request; and
the step of the central arbitration server initiating a service layer to supply the requested service;
the step of the central arbitration server generating a call detail record for the service request and populating one or more call detail record fields thereof by default; and
the step of the central arbitration server allowing an application corresponding to the requested service to extend the one or more call detail record fields known to the central arbitration server by allowing the application to populate a generic filed within the call detail record with information specific to the requested service provided by the application in order to allow the application to add information on a per call detail record basis, wherein the generic field within the call detail record can be populated by a plurality of applications to add information specific to services offered by each of the plurality of applications.

41. System and device for integrating IP and analog telephone systems

US7203186B1 | FULLER WILLIAM H, TRAN SON T

Bibliographic data

Publication date: 2007-04-10
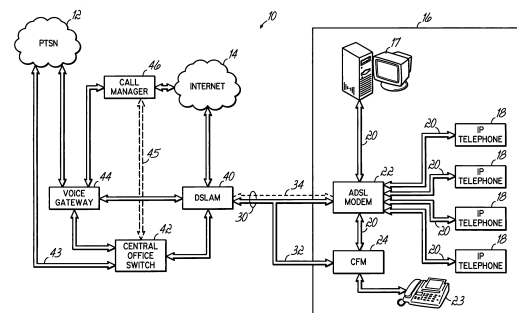Application date: 2000-11-27
Earliest priority date: 2000-11-27

Inventors: FULLER WILLIAM H, TRAN SON T

CPC classification: H04M 7/0057, H04M 7/122
IPC classification: H04L 12/66

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A system and a call forwarding manager device for providing Internet telephony to a subscriber's premises via the subscriber's Internet connection, facilitated by the subscriber's analog telephone connection. Incoming analog telephone calls are received by the call forwarding manager connected to the subscriber's analog telephone line, which responds by generating a request for service from a voice gateway, which may be remotely located. The voice gateway then generates an Internet telephone connection from the voice gateway to an Internet protocol telephone owned by the subscriber, and then connects the analog telephone call via the voice gateway to the Internet protocol telephone via the subscriber's Internet connection.

First claim

A method of providing Internet telephony to a subscriber premises via a subscriber Internet connection to said subscriber premises, using an analog telephone connection, comprising
providing a voice gateway converting Internet telephony and analog telephony standards to facilitate the use of Internet and analog telephony by said subscriber,
providing a call forwarding manager connected to said analog telephone connection,
providing an Internet protocol telephone at said subscriber premises,
receiving an analog telephone call from said analog telephone connection at said call forwarding manager, and responding to said reception by generating a request for service from said voice gateway,
generating an Internet telephone connection from said voice gateway to said Internet protocol telephone at said subscriber premises in response to said request for service from said call forwarding manager, and
connecting said analog telephone call via said voice gateway to said Internet protocol telephone via said subscriber Internet connection.

42. Host-based device to terminate a modem relay channel directly to an IP network

US20030210677A1 | Cisco Technology Inc

Bibliographic data
Publication date: 2003-11-13
Application date: 2002-05-10
Earliest priority date: 2002-05-10

Inventors: GROVE VINCENT T, WILDFEUER HERBERT
                       M, GARAKANI MEHRYAR KHALILI

CPC classification: H04L 12/4633, H04L 69/08, H04L 69/168, H04L 69/169,
                       H04M 7/125
IPC classification: H04L 12/46, H04L 29/06, H04M 7/00

External links: Google Patents, Espacenet, PatBase Express,
                       PatBase, Orbit

Abstract
A modem data aggregating gateway that supports modem relay functionality for permitting reliable switching of modem traffic between a VoIP network and a data packet switch Internet Protocol (IP) network, s.a. the Internet. The modem relay aggregator may receive modem data encapsulated as Voice over IP (VoIP) data packets in accordance with a Simple Reliable Protocol Transport (SRPT) mechanism. The packet data may be error corrected and/or decompressed before being repackaged for forwarding to the ultimate destination. In the event that the destination is itself an IP device, the modem relay aggregator may forward the packets directly over the IP network. As a result, if the destination of a modem call is an IP device (such as a Web site or other Internet-enabled device) the technique eliminates two points from a processing path in which digital signal processing (DSPs) would otherwise have to perform modem protocol processing. Otherwise, minimal modem reformatting can be performed at the aggregation point.

First claim
A method for terminating a modem session to transport data across a voice-over-Internet Protocol (VoIP) network using a modem relay (MR) technique, the method provided as host-processor-based software executed on a general purpose computing device, the method comprising:
removing encapsulation information from a data packet used to support network transport of the data;
acting as a termination point for the session;
encapsulating the data in an Internet Protocol (IP) packet with a destination address of an IP device;
delivering the IP packet to the computer network for delivery to the IP device.

43. User transparent internet telephony device and method

US20020114439A1 | BAILEY JR ESSEL, BAILEY MENAKKA

Bibliographic data

Publication date: 2002-08-22
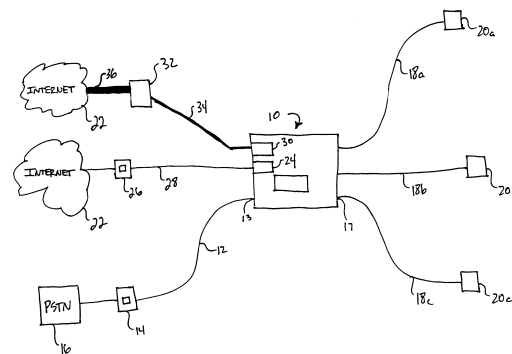Application date: 2002-01-22
Earliest priority date: 2001-01-19

Inventors: DUNLAP JOHN H

CPC classification: H04L 65/103, H04L 65/104, H04L 65/1043, H04L 65/1069, H04M 19/00, H04M 3/10, H04M 3/12, H04M 3/42289, H04M 7/0057, H04M 7/0069

IPC classification: H04M 3/42, H04L 29/06, H04M 7/00, H04M 3/10, H04M 19/00, H04M 3/12

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A telephone gateway device that operates in a manner transparent to calling and called parties is provided. The gateway includes a port for connecting one or more POTS devices, a port for connecting to a local PSTN, a modem, and a network interface. The gateway selectively routes toll calls made on an attached POTS device over a computer network, such as the internet, via either the modem or the network interface. Methods of routing and facilitating telephone connections over a computer network are also provided.

First claim

A telephone gateway device for selectively routing telephone calls between a local PSTN and a computer network, the device comprising:
a first telephone port adapted to connect to at least one POTS device;
a second telephone port adapted to connect to a standard telephone jack connected to said PSTN;
a modem adapted to establish a dial-up connection to said computer network;
a network interface device adapted to establish a broadband connection to said computer network;
a CODEC for encoding and decoding voice data relating to said telephone calls;
an internet telephony protocol for controlling internet telephone sessions on said computer network; and
a detection circuit including a microprocessor for detecting an initiation of a toll call on an attached POTS device and selectively routing the toll call to said computer network via either the modem or the network interface.

44. Distributed edge switching system for voice-over-packet multiservice network

Bibliographic data
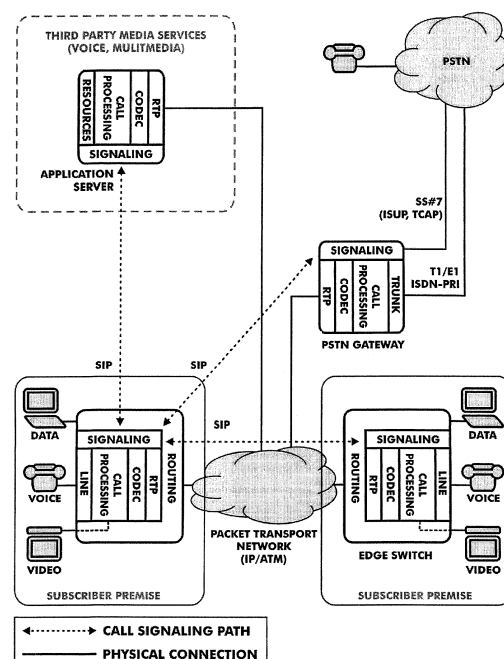Publication date: 2007-10-16
Application date: 2002-04-15
Earliest priority date: 2001-04-13

Inventors: GIRARD GREGORY D

CPC classification: H04M 3/42153, H04M 3/42314, H04M 7/006, H04M 7/0069, H04M 7/0093, H04M 7/1225
IPC classification: H04L 12/56, H04L 12/28, H04L 12/66, H04M 3/42, H04M 7/00, H04J 1/02

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract
A network device including a plurality of communication interfaces, including a telephone line interface, a computer data interface, and a broadband network interface; a processor; a machine-readable storage medium which during use stores a call processing application and service profiles, and which stores executable instructions to mediate communications between the plurality of communication interfaces, the instructions causing the network device to detect network signaling events or trigger points in a telephone call and invoke the call processing application in response to the detected network signaling events or trigger points, the call processing application operating according to parameters defined in the service profiles.

First claim
A network device comprising:
a plurality of communication interfaces, including a telephone line interface, a computer data interface, and a broadband network interface;
a processor;
a machine-readable storage medium which during use stores a call processing application and service profiles, and which stores executable instructions to mediate communications between the plurality of communication interfaces, the instructions causing the network device to
detect network signaling events or trigger points in a telephone call and
invoke the call processing application in response to the detected network signaling events or trigger points, the call processing application operating according to parameters defined in the service profiles.

45. Computer telephony adapter and method

US6345047B1 | Northern Telecom Ltd

Bibliographic data

Publication date: 2002-02-05
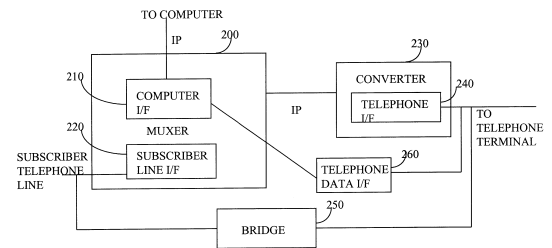Application date: 1998-06-12
Earliest priority date: 1998-06-12

Inventors: REGNIER JEAN MICHEL

CPC classification: H04L 12/6418, H04M 7/0069
IPC classification: H04M 7/00, H04L 12/64

External links: Google Patents, Espacenet, PatBase Express,
                      PatBase, Orbit

Abstract

For use at a subscriber site with a subscriber line, for simultaneously sending a telephone call from a PSTN compatible telephone terminal on the subscriber site, and IP packets from a first computer, over the subscriber line, the adaptor has a converter for converting signals from the telephone terminal into IP packets, and a multiplexer, for sending simultaneously the IP packets representing the telephone call and those from the computer, along the subscriber line. The adaptor is also arranged to handle calls without conversion to IP packets, when the subscriber telephone line is not used for carrying IP packets. Using one subscriber line, all phones in a household can remain operational, to make and receive calls, while one or more PCs are concurrently accessing online services, without needing a second line, or special equipment to increase the bandwidth transmissible over the line.

First claim

Apparatus for use at a subscriber site with a subscriber telephone line connecting the subscriber site and a telephone network, for simultaneously sending a telephone call from a PSTN compatible telephone terminal on the subscriber site, and IP packets from a first computer, over the subscriber telephone line, the apparatus comprising:
a converter having a PSTN compatible telephone line interface for coupling to the PSTN compatible telephone terminal, the converter being for converting signals from the PSTN compatible telephone terminal into IP packets representing the telephone call; and
a multiplexer coupled to the converter, and having a computer interface for coupling to the first computer, and a subscriber line interface for coupling to the subscriber telephone line, the multiplexer being arranged for sending simultaneously the IP packets representing the telephone call and those from the computer, along the subscriber telephone line;
the apparatus being arranged to handle telephone calls without conversion to IP packets, between the telephone terminal and the subscriber telephone line when the subscriber telephone line is not used for carrying IP packets.

46. BROADBAND COMMUNICATIONS ACCESS DEVICE

KR100482389B1 |

Bibliographic data

Publication date: 2005-04-14
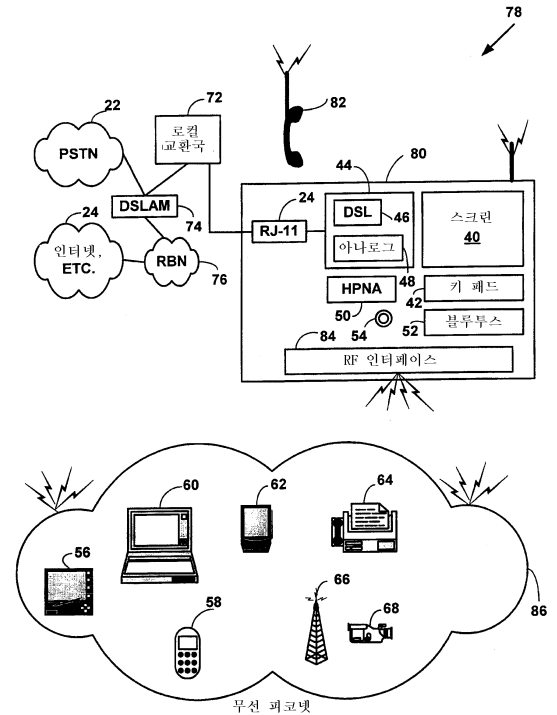Application date: 2002-07-30
Earliest priority date: 2000-01-31

Inventors: ,스티븐,   엔-영, 왕,레이

CPC classification: H04L 12/28
IPC classification: H04L 12/28

External links: Google Patents, Espacenet, PatBase Express,
                              PatBase, Orbit

Abstract

An integrated telephone based home gateway system is disclosed. The integrated telephone-based home gateway system includes a broadband communication device such as an integrated, digital subscriber line (DSL), analog modem, and wireless interface to a screen phone to provide broadband communications to home users. A plurality of home users may conduct the Internet and e-commerce, receive content news, enjoy entertainment on demand, access content services for audio or video communication, and perform telephony or telecommuting. These screen phone-based, modular, plug and play home gateway interfaces allow home networking as well as home networking, provide automatic data and broadband initialization, arrangement, service preparation and routing and bridging capabilities Allow resources to be shared between home devices via wired, wireless, coaxial or optical cable connections.

First claim

An integrated telephone-based home gateway system that provides home-to-home and in-home networking.
Home gateway interfaces 18 and 36 for initializing data communication parameters, initializing broadband communication service configuration and provision, and providing routing or bridging for networking communication;
A communication interface 44 connected to one or more networks 22 and 24, providing data communication, and providing narrowband communication including wideband and voice communications;
A processor for processing information from the one or more networks (22, 24);
A display interface (40) for displaying said information from said one or more networks (22,24); And
An integrated phone-based home gateway system comprising a wireless communication interface (52, 84) connected to an external wireless device.

47. Method and apparatus for co-socket telephony

US7778237B2 | RPX NW Acquisition LLC

Bibliographic data

Publication date: 2010-08-17
Application date: 2005-06-02
Earliest priority date: 1998-07-21

Inventors: DOWLING ERIC MORGAN

CPC classification: H04L 67/02, H04L 69/162, H04L 69/163, H04L 69/165, H04L 69/329, H04M 11/06, H04M 3/42042, H04M 3/5191, H04M 7/0057, H04M 7/0075

IPC classification: H04L 12/66, H04L 29/08, H04M 3/42, H04L 29/06, H04M 7/00, H04M 3/51, H04M 11/06, H04L 29/12

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
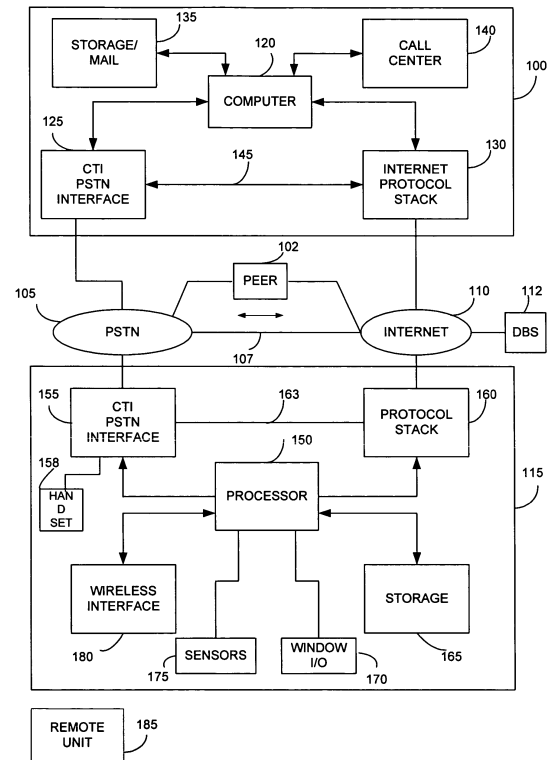
Abstract

Embodiments disclosed herein relate to a wireless mobile device wireless air interface that enables both circuit-switched and packet-switched wireless communications between a wireless mobile device and one or more remote stations that can be computer telephony integration servers, or peer devices such as smart telephones or wireless smart telephones, or wireless mobile devices.

First claim

A wireless mobile device, comprising:

a first wireless air interface which enables circuit-switched communications between the wireless mobile device and a circuit-switched telephone network using a first wireless air interface protocol;

a second wireless air interface which enables packet-switched wireless communications between the wireless mobile device and an internet, using a second wireless air interface protocol;

a user interface which enables a user to specify a set of dialing digits corresponding to a telephone number of a callee where the callee can be reached; and

executable instructions which implement a plurality of functions, including:

sending a first internet protocol (IP) packet comprising a representation of the set of dialing digits to a remote database server, via the second wireless air interface and via a wide area network connection at least partially through the internet;

receiving from the remote database server, via the second wireless air interface, a second IP packet comprising an internet address where a remote station associated with the callee can be presently reached via an internet connection; and

establishing, using the internet address, a voice telephony connection between the wireless mobile device and the remote station, at least partially via the internet, wherein at least a portion of the voice telephony connection uses a voice over internet (VoIP) communication protocol; and

transmitting and receiving respective transmit and receive streams of VoIP voice packets via the second wireless air interface in support of the voice telephony connection,

wherein the wireless mobile device can place dialed telephone calls to a second remote station via the first wireless air interface, at least partially via the public switched telephone network (PSTN).

48. Activity log for improved call efficiency

US6917610B1 | AT&T Corp

Bibliographic data

Publication date: 2005-07-12
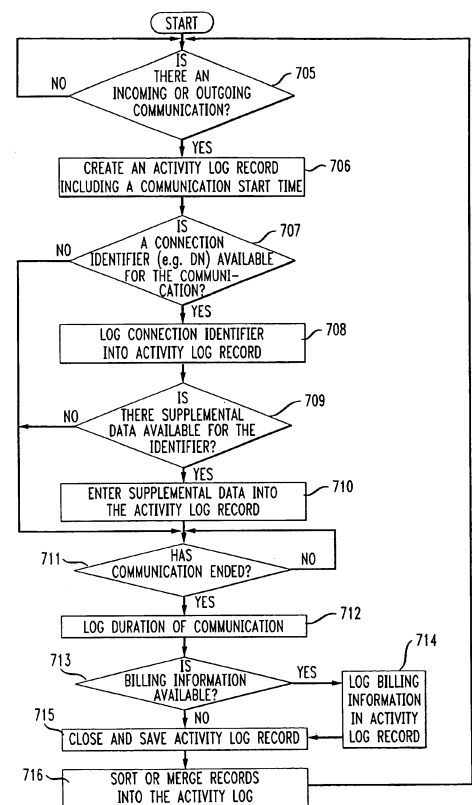Application date: 1999-12-30
Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, RUSSELL JESSE
                    EUGENE, SANKALIA ANISH, WANG SPENCER

CPC classification: H04Q 3/0045
IPC classification: H04L 12/66, H04Q 3/00

External links: Google Patents, Espacenet, PatBase Express,
                      PatBase, Orbit

Abstract

The present invention provides for an activity log which may include user proactive billing management for use in a broadband communications system that guarantees voice, data and video communication reliability and security to users for an integrated telephone, television and data network. The activity log and user proactive billing management may log incoming calls directory numbers (DNs) and outgoing call DNs in a database that may be provided at a central system location, such as the IP Central Station or at the system subscriber's customer premises equipment. The activity log may also log incoming and outgoing email interactive sessions (e.g., instant message (IM) email) and log multimedia video and audio calls. According to a variation of the invention, the user may access the activity log(s) and identify any communication the cost of which should be billed to a different party. The activity log may also be sorted based on user preferences and set to direct calls to low cost alternatives.

First claim

A method of logging using information related to communication activity in an integrated broadband communication system, comprising the steps of:

creating an activity log for a user's system address that logs data associated with one of an incoming and outgoing communications of more than one type of media including telephone, text data, and multimedia video and audio, the logged data including the directory number of the incoming/outgoing communication and billing information associated therewith;

determining if there is said one of an incoming and outgoing communication for a user's system address;

creating a new record for said activity log if there is a said one of an incoming and outgoing communication, said new record comprising data associated with one of an incoming and outgoing communications including the directory number of the incoming/outgoing communication and billing information associated therewith.

49. Broadband communications access device

US7424024B2 | 3E Technologies International Inc

Bibliographic data

Publication date: 2008-09-09
Application date: 2004-08-12
Earliest priority date: 2000-01-31

Inventors: CHEN STEVEN CHIEN-YOUNG, WANG RAY, COLEMAN RYON K

CPC classification: H04L 12/2803, H04L 12/2834, H04L 12/56, H04L 12/66, H04L 2012/5615, H04L 2012/5663, H04M 1/2535, H04M 1/725, H04M 2250/02, H04Q 11/0478, H04W 88/16

IPC classification: H04L 12/56, H04L 12/28, H04L 29/06, H04M 1/253, H04M 1/725, H04Q 11/04

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A broadband communications access device. The broadband communications access devices includes a gateway interface, wired interface, wireless interface and security interface for proving secure wired and wireless broadband communications access.

First claim

An integrated secure gateway system, comprising in combination:

a gateway interface for initializing wireless and wired broadband communications, for providing gateway, routing and bridging for wireless and wired broadband networking communications and for automatic service provisioning for allocating, configuring and maintaining multiple transmission channels and virtual communications paths used for wired and wireless broadband communications;

a wired communications interface for connecting to external wired devices, for connecting to one or more wired broadband communications networks and for providing wired broadband communications;

a wireless communications interface for connecting to external wireless devices, for connecting to one or more wireless broadband communications networks, for providing wireless broadband communications;

a security interface for providing secure communications via the wired communications interface and via the wireless communications interface; and

a network power module for providing power to the integrated secure gateway system, wherein the network power module obtains power from a communications wire connected between the integrated gateway system and a wired communications network.
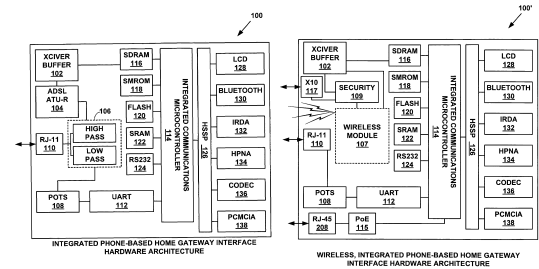
50. IP-flow identification in a wireless point to multi-point transmission system

US6594246B1 | Intellectual Ventures I LLC

Bibliographic data

Publication date: 2003-07-15
Application date: 1999-07-09
Earliest priority date: 1998-07-10

Inventors:	JORGENSEN JACOB W

CPC classification: H04L 1/20, H04L 12/1827, H04L 12/1836, H04L 12/189, H04L 47/193, H04L 47/27, H04L 63/0272, H04L 63/0428, H04L 69/161, H04L 69/163, H04L 69/165, H04L 69/169, H04Q 11/0414, H04Q 2213/1305, H04Q 2213/13096, H04Q 2213/13097, H04Q 2213/13098, H04Q 2213/13141, H04Q 2213/13166, H04Q 2213/13176, H04Q 2213/13196, H04Q 2213/13204, H04Q 2213/13216, H04Q 2213/1322, H04Q 2213/13292, H04Q 2213/13296, H04Q 2213/13348, H04Q 2213/13389, H04W 28/0273, H04W 28/20, H04W 28/24, H04W 28/26, H04W 72/04, H04W 72/1205, H04W 8/04, H04W 80/00, H04W 88/06

IPC classification: H04W 72/04, H04L 12/56, H04L 12/28, H04W 72/12, H04W 80/00, H04W 88/06, H04W 24/00, H04L 29/06, H04L 1/20, H04W 28/24, H04Q 11/04, H04W 28/06, H04L 12/18, H04W 28/20, H04W 28/26

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A packet-centric wireless point to multi-point telecommunications system includes: a wireless base station coupled to a first data network; one or more host workstations coupled to the first data network; one or more subscriber customer premise equipment (CPE) stations in wireless communication with the wireless base station over a shared bandwidth using a packet-centric protocol; and one or more subscriber workstations coupled to each of the subscriber CPE stations over a second network; a resource allocation device optimizing end-user quality of service (QoS) and allocating shared bandwidth among the subscriber CPE stations; device for analyzing and scheduling an internet protocol (IP) flow over the shared wireless bandwidth, wherein the analyzing device comprises: identifying device identifying the IP flow.

First claim

A packet-centric wireless point to multi-point telecommunications system comprising:
a wireless base station coupled to a first data network;
one or more host workstations coupled to said first data network;
one or more subscriber customer premise equipment (CPE) stations in wireless communication with said wireless base station over a shared bandwidth using a packet-centric protocol; and
one or more subscriber workstations coupled to each of said subscriber CPE stations over a second network;
resource allocation means optimizing end-user quality of service (QoS) and allocating shared bandwidth among said subscriber CPE stations; and
means for analyzing and scheduling an internet protocol (IP) flow over said shared wireless bandwidth, wherein said analyzing means comprises:
identifying means identifying said IP flow.
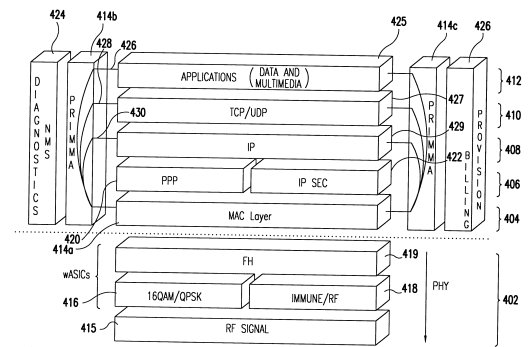
51. DEDICATED SYSTEM AND PROCESS FOR DISTRIBUTED COMMUNICATION ON A PACKET-SWITCHED NETWORK

WO1998011704A2 | DIALNET INC

Bibliographic data

Publication date: 1998-03-19
Application date: 1997-09-12
Earliest priority date: 1996-09-12

Inventors: LEE DON JOON, YAN CHARLES

CPC classification: H04L 2012/6429, H04L 2012/6472, H04L 2012/6475, H04M 1/2535, H04M 1/27, H04M 15/56, H04M 2215/202, H04M 2242/22, H04M 3/42059, H04M 3/42102, H04M 7/0057, H04Q 3/72

IPC classification: H04M 7/00, H04M 1/253, H04L 12/64, H04Q 3/72, H04M 1/27

External links: Google Patents, Espacenet, EP Register, Patentscope, PatBase Express, PatBase, Orbit

Abstract

A dedicated appliance for packet-switched voice communication is provided with a mechanism to ensure that both the caller and a recipient of voice communication having a similar appliance have a connection to the packet-switched network. Such an appliance eliminates the need for complex and expensive multimedia computer systems and Internet telephony software which requires a pre-existing network connection for both parties prior to initiating communication. In one embodiment of the invention, a caller's appliance may cause a recipient's appliance to connect to the packet-switched network through the access medium of the recipient. Another mechanism which enables switching between circuit-switched and packet-switched voice communication allows for both kinds of communication to be used by the same appliance. Once connected to the network, the caller and recipient may establish a connection therebetween over the packet-switched network to permit communication. Network service providers (NSP) which provide access to the packet-switched networks for users do not need to dedicate connection ports to voice communication and therefore can allow use of any connection port for any purpose with the existing infrastructure.

First claim

A communication system for communication using a packet switched network, comprising: a first network access system for providing access to the packet switched network; a second network access system for providing access to the packet switched network; a first appliance having means for connecting to the first network access system through a first access medium, and means for sending and receiving packets through the means for connecting to the packet switched network; a second user appliance having means for connecting to the second network access system through a second access medium, wherein the second appliance includes means for causing the first appliance to connect to the packet switched network through the first network access system using the means for connecting to the first network access system, and means for sending and receiving packets to and from the first appliance through the means for connecting and the packet switched network.
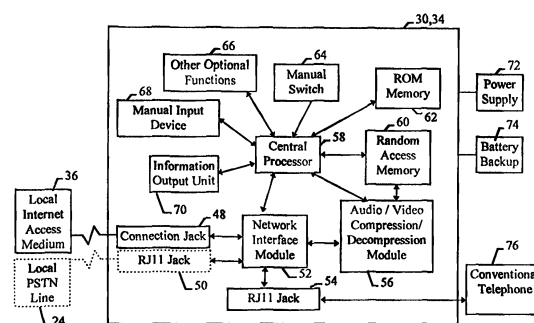
52. Broadband communications access device

US7397807B2 | 3E Technologies International Inc

Bibliographic data

Publication date: 2008-07-08
Application date: 2003-03-10
Earliest priority date: 2000-01-31

Inventors: CHEN STEVEN CHIEN-YOUNG, WANG RAY

CPC classification: H04L 12/2812, H04L 12/2834, H04L 12/2838, H04L 12/56, H04L 2012/2841, H04L 2012/2845, H04L 2012/5615, H04L 2012/5663, H04M 1/2535, H04M 1/725, H04M 2250/02, H04Q 11/0478, H04W 28/18, H04W 72/00, H04W 88/16, H04W 92/02

IPC classification: H04L 12/56, H04L 12/28, H04W 72/00, H04L 29/06, H04W 88/16, H04M 1/253, H04W 92/02, H04M 1/725, H04Q 11/04, H04W 28/18

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
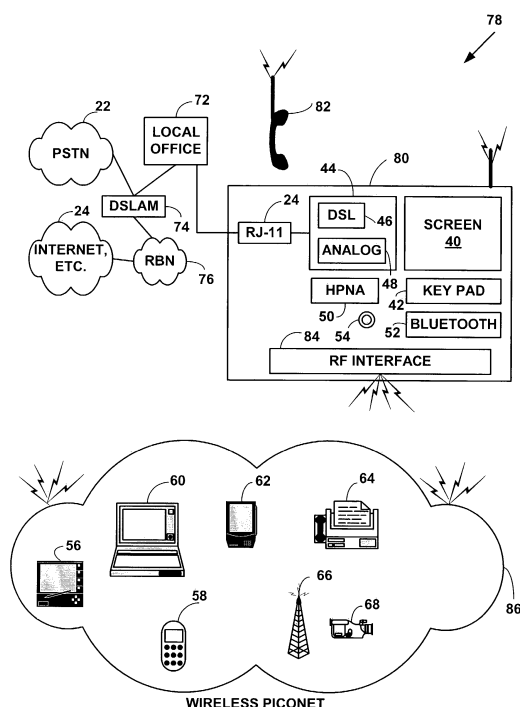
Abstract

A integrated phone-based home gateway system. The integrated phone-based home gateway system is a multi-function wireless networking, wireless telephony, broadband, gateway device. It provides automatic wireless broadband initialization, configuration and service provisioning, gateway, routing and bridging functionality, wireless data and telephony functionality and allows resource sharing among multiple wireless devices.

First claim

An integrated phone-based home gateway system, comprising, in combination:
a home gateway interface for automatically initializing wireless voice communications, automatic initializing wireless data communications and for providing gateway, routing and bridging for wireless networking communications, wherein the home gateway interface includes automatic service provisioning on the home gateway interface for automatically allocating, configuring and maintaining multiple transmission channels and multiple virtual communications paths used for wireless broadband communications;
a plurality of wireless communications interfaces for automatically connecting to external wireless devices, for automatically connecting to one or more wireless communications networks, for providing wireless broadband communications and for providing wireless narrow-band communications, wherein the plurality of wireless communications interfaces includes a Bluetooth protocol interface, an 802.11b protocol interface, a RF Home protocol interface, a Shared Wireless Access Protocol interface and a Wireless Application Protocol interface, and wherein the plurality of wireless communications interface include a short-range wireless communications interface for connecting to external wireless network devices on a wireless piconet and a long-range wireless communications interface for connecting to external wireless network devices on a wireless wide area network and wherein one or more of the plurality of wireless communications interfaces includes wireless communications channels for wireless Voice-over-Internet Protocol (VoIP) communications; and
a multi-function telephony handset for providing telephony communications.

53. System and method to internetwork wireless telecommunication networks

US6996076B1 | Sonus Networks Inc

Bibliographic data

Publication date: 2006-02-07
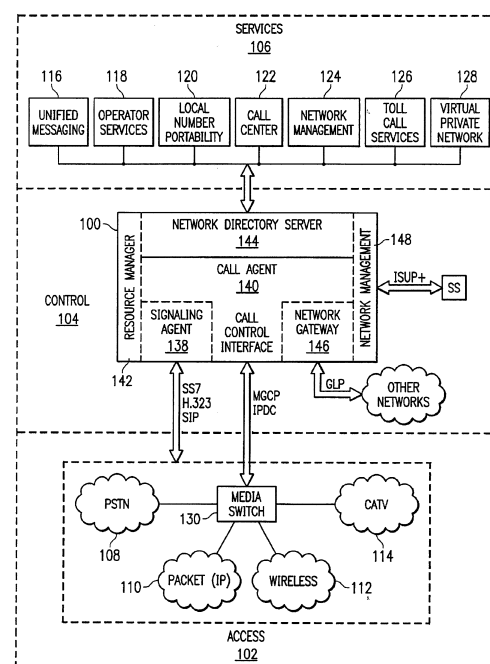Application date: 2001-03-29
Earliest priority date: 2001-03-29

Inventors: FORBES BRIAN M, KACZMARCZYK CASIMER M

CPC classification: H04L 63/08, H04L 65/103, H04L 65/104, H04L 65/1043, H04L 65/1053, H04W 40/00, H04W 72/04, H04W 76/10, H04W 8/245, H04W 80/00, H04W 92/02

IPC classification: H04B 7/00

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

One aspect of the invention is a method for wireless call processing. The method includes downloading at least one function-specific logic control program into each of a plurality of generic logic control state machines and receiving a message at a wireless protocol-specific codec, parsing the message, and routing the message to a first logic control state machine associated with the protocol-specific codec. The method also includes executing the function-specific logic control program of a first logic control state machine and generating a call event and routing the call event to an event codec. The method also includes executing the function-specific logic control program of a second logic control state machine and processing the call event. In a particular embodiment, the method also includes allocating an RF channel that may be used for the call event without seizing the RF channel. In another embodiment, the method also includes accessing a database that includes routing and verification information related to the call event, and routing the call event in response to the information.

First claim

A protocol-independent system for processing a wireless call event, comprising:
at least one control agent having
a first generic logic control state machine operable to execute a first logic control program to process a signaling message;
a first signaling codec specialized in a particular wireless signaling protocol and operable to parse and format the signaling messages; and
a first filter operable to filter and route the signaling messages from the codec to the first logic control state machine;
at least one mobility management agent having
a second generic logic control state machine operable to execute a second logic control program to process a control protocol message;
a second codec specialized in a particular wireless control protocol and operable to parse and format the control protocol messages; and
a second filter operable to filter and route the control protocol messages from the codec to the second logic control state machine; and
at least one intelligence control agent having
a third generic logic control state machine operable to execute a third logic control program to process call events received from the mobility management agent and the control agent; and

access to a database, the database including routing and verification information related to the call event.

54. Facility management platform for a hybrid coaxial/twisted pair local loop network service architecture

US7184428B1 | AT&T Corp

Bibliographic data

Publication date: 2007-02-27
Application date: 2002-03-08
Earliest priority date: 1997-12-31

Inventors: GERSZBERG IRWIN, MARTIN JEFFREY S, OPLINGER THOMAS, TREVENTI PHILIP ANDREW, WALKER HOPETON S

CPC classification: H04L 12/2856, H04L 12/2872, H04L 12/2898, H04L 2012/6424, H04L 41/0213, H04L 47/6215, H04L 47/76, H04L 49/30, H04L 65/40, H04N 17/004, H04N 7/17309

IPC classification: H04L 12/66, H04L 49/111, H04L 47/76

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

The present invention provides a facility management platform to monitor and view the status of a plurality of individually addressable downstream devices including, but not limited to, addressable terminals, IRG's, settops, cable modems, taps, nodes, and/or hubs at a network control center. The FMP may display problems at these downstream devices, for example, power loss, and/or may automatically notify the appropriate companies and/or personnel to correct the problem.

First claim

A telecommunications interface for communicating subscriber data including voice data, signaling data, and user data between a digital network, a digital loop carrier having an analog interface to connect telephones and a digital circuit connecting a telephone switch to other telephone switches, and a subscriber link to subscriber premises equipment (SPE), said interface comprising:

a controller;

a modem that modulates and demodulates the subscriber data to and from the subscriber link to generate a digital stream including the voice data, signaling data and user data;

a digital filter that separates the voice data from the digital stream,

said controller applying the voice data to the digital circuit when the signaling data indicates the voice data is to be transmitted by the digital circuit, and

said controller applying the voice data to the digital network when the signaling data indicates the voice data is to be transmitted over the digital network; and

a DTMF generator;

said interface being connected to a switched network requiring the transmission of DTMF tones for calls to be routed through the switched network, and

said DTMF generator generating DTMF tones in response to said signaling data indicated that the call is to be transmitted through the switched network.
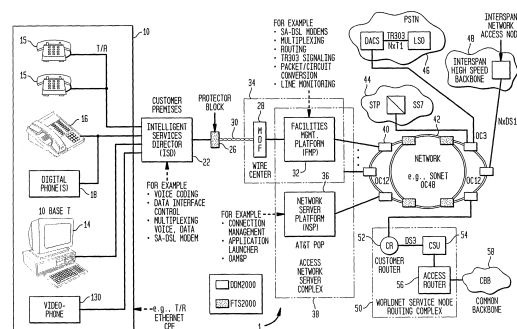
55. Home networking gateway

US7035270B2 | General Instrument Corp

Bibliographic data

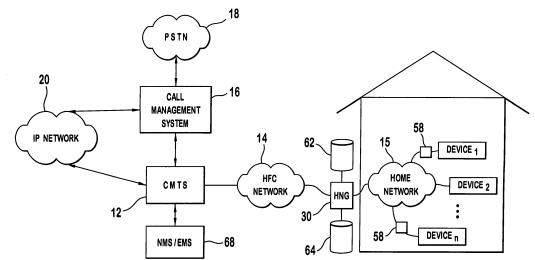Publication date: 2006-04-25
Application date: 2000-12-29
Earliest priority date: 1999-12-30

Inventors: MOORE JR RICHARD, BLUM WILLIAM H

CPC classification: H04L 12/2803, H04L 12/2809, H04L 12/2836, H04L 12/40097, H04L 12/6418, H04N 7/106, H04N 7/22, H04W 4/18, H04W 88/16

IPC classification: H04L 12/56, H04L 12/28, H04L 12/40, H04N 7/10, H04L 12/64, H04N 7/22

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A home networking gateway provides an interface between an HFC network and an in-home network. Full voice and data connection between the HFC network and each device in the in-home network is provided through the interface. A translator included in the home networking gateway is utilized to provide a mapping between the communication protocols used in the in-home network and the protocols used in the HFC network, eliminating the need for the in-home network to be dependent upon the HFC-specific protocols.

First claim

An arrangement for providing a communication interface between a hybrid fiber coaxial (HFC) network and an in-home communications network, the arrangement comprising:

a home networking gateway disposed to communicate with the HFC network and couple communications to the in-home network, the home networking gateway including a translator for mapping between HFC-based communication protocols and in-home network-based protocols wherein the home networking gateway further comprises;

a home network interface connection module for supporting a pre-defined in-home communication protocol;

a voice telephony service connection module, coupled to the home network interface connection module, for providing communication with in-home telephony devices;

a data service connection module for providing communication with in-home data-based devices;

a cable modem connection module for providing communication with the HFC network;

a communication bus coupled to each of the voice telephone service connection module, the data service connection module and the cable modem connection module for enabling communication between each module; and

a translator processor coupled to the communication bus for mapping between communication protocols used by the HFC network and protocols used by the in-home network and providing translated protocols with each transaction;

a device database coupled to said home networking gateway and comprising configuration files associated with various in-home telecommunications devices; and

a service level agreement database coupled to said home networking gateway and comprising a listing of authorized services for the in-home network, class of service information and quality of service information.

56. Internet switch box, system and method for internet telephony

US6377570B1 | FoneFriend Systems Inc

**Bibliographic data**

Publication date: 2002-04-23
Application date: 1998-03-09
Earliest priority date: 1997-02-02

Inventors: VAZIRI FARAMARZ, WIMSATT JOHN D

CPC classification: H04L 12/5692, H04L 2012/6429, H04L 2012/6443, H04L 2012/6472, H04L 2012/6475, H04L 2012/6481, H04L 2012/6486, H04L 65/102, H04L 65/1069, H04M 1/2535, H04M 15/49, H04M 15/51, H04M 15/55, H04M 15/56, H04M 2215/0168, H04M 2215/0176, H04M 2215/202, H04M 2215/44, H04M 2215/46, H04M 2215/54, H04M 3/428, H04M 3/4938, H04M 3/5307, H04M 3/533, H04M 3/537, H04M 3/567, H04M 7/0057, H04M 7/0069, H04M 7/122, H04Q 3/72

IPC classification: H04L 12/28, H04L 29/06, H04M 7/00, H04M 3/493, H04M 1/253, H04M 3/56, H04M 3/537, H04M 3/533, H04M 3/428, H04L 12/64, H04Q 3/72, H04M 3/53

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
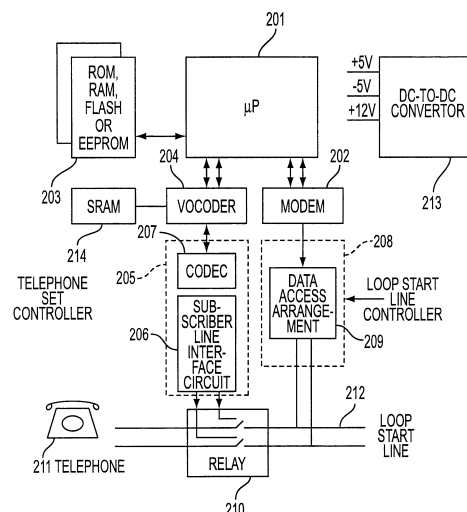
Abstract

An Internet switch box connects between a telephone set and a public switched telephone network (PSTN) line, the latter of which is used both for PSTN telephone conversations and for connection to an Internet service provider (ISP). The switch box contains hardware and embedded software for establishing a connection to an ISP and for Internet telephone. When two users, each having an Internet switch box connected to the telephone set, wish to have an Internet telephone conversation, one calls the other over the PSTN. When they agree to an Internet telephone conversation, they signal their Internet switch boxes, by pressing either buttons on the switch boxes or certain keys on the telephone keypads, to switch to Internet telephone. The switch boxes disconnect the PSTN call and connect to their ISPs. Once the switch boxes are on the Internet, they contact each other through a server which supplies Internet protocol (IP) addresses of switch boxes, and the users continue their conversation by Internet telephone. The users can also prearrange to call each other solely by Internet telephone, in which case they do not need to talk to each other over the PSTN.

First claim

A switch box for connecting a first telephone set and a second telephone set over a selected one of a primary network and a secondary network, the switch box comprising:
primary network connecting means for connecting the first telephone set to the primary network;
secondary network connecting means for connecting the first telephone set to the secondary network, for receiving address information from the secondary network to locate the second telephone set on the secondary network and for establishing a connection over the secondary network between the first telephone set and the second telephone set;
relay means for (i) connecting, when the relay means is in a first state, the first telephone set to the primary network connecting means and for (ii) connecting, when the relay means is in a second state, the first telephone set to the secondary network connecting means; and
switching means for receiving a switch-over command to switch from the primary network to the secondary network and for controlling, in response to the switch-over command,
the relay means to disconnect the first telephone set from the primary network connecting means and to connect the first telephone set to the secondary network connecting means and (ii) the secondary network connecting means to establish the connection over the secondary network between the first telephone set and the second telephone set.

57. Method and apparatus for transmitting wired data voice over IP data and wireless data through a common IP core network

US7380022B2 | Motorola Inc

Bibliographic data
Publication date: 2008-05-27
Application date: 2001-12-28
Earliest priority date: 2001-12-28

Inventors: TELL DANIEL FRANCIS, PIERCE WILLIAM R, VESSAL KAVEH

CPC classification: H04L 61/00, H04L 65/103, H04L 65/104, H04L 65/1043, H04Q 2213/13003, H04Q 2213/13034, H04Q 2213/13039, H04Q 2213/13093, H04Q 2213/13098, H04Q 2213/13174, H04Q 2213/13176, H04Q 2213/13196, H04Q 2213/13202, H04Q 2213/13204, H04Q 2213/13297, H04Q 2213/13298, H04Q 2213/13332, H04Q 2213/13348, H04Q 2213/13376, H04Q 2213/13383, H04Q 2213/13389, H04W 4/16, H04W 68/00, H04W 76/12, H04W 80/00

IPC classification: G06F 15/16, H04L 12/56, H04L 12/28, H04W 80/00, H04W 68/00, H04L 29/06, H04W 76/02, H04W 4/16, H04L 29/12

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
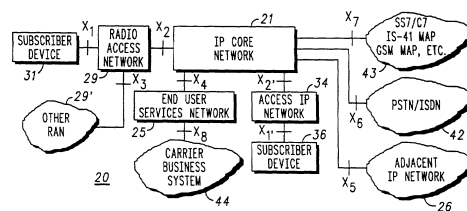
Abstract
A system for transmitting data through an IP core network so that data may be transmitted from an originating source, through a public switched telephone network (PSTN) and through the IP core network to a land line telephone and a cellular telephone. The system includes an IP core network that is coupled to the PSTN through an interface. The IP core network is also coupled to an access IP network. A radio access network is coupled to the IP core network and the cellular telephone. Upon receipt of data from the originating source, the IP core network simultaneously initiates a ringing of the land line telephone through the access IP network and a paging of the cellular telephone through the radio access network.

First claim
A system for transmitting data through an IP core network so that data may be transmitted from an originating source, though a public switched telephone network (PSTN) and through the IP core network to at least one of a wired handset and a wireless handset, the system comprising:
an IP core network,
the IP core network coupled to the PSTN through an interface, the IP core network also coupled to an access IP network,
a radio access network coupled to the IP core network and the wireless handset,
a register of wired handsets and wireless handsets from among the at least one of a wired handset and a wireless handset and the registered wired handsets and wireless handsets are on the register when such registered wired handsets and wireless handsets are accessible within IP core network and the radio access network and wherein the register is compiled by the handsets when the handsets become accessible on the network, and
upon receipt of data from the originating source, the IP core network simultaneously initiating a ringing of the wired handset available on the register through the access IP network and a paging of the wireless handset available on the register through the radio access network.

58. Chase me system

US6373817B1 | AT&T Corp

Bibliographic data

Publication date: 2002-04-16
Application date: 1999-12-30
Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, RUSSELL JESSE EUGENE, SANKALIA ANISH, WANG SPENCER

CPC classification: H04L 12/5692, H04M 2201/60, H04M 3/42229, H04M 7/1215, H04M 7/125, H04M 7/126, H04M 7/128, H04M 7/129

IPC classification: H04L 12/28, H04M 3/42, H04M 7/00

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
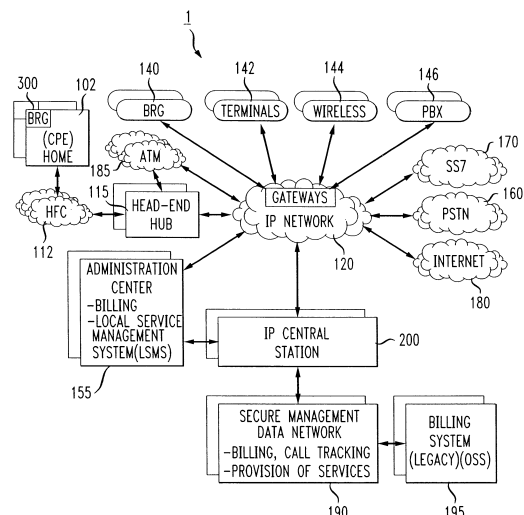
Abstract

A chase me method of routing a variable bit rate communication between a first terminal and a distant terminal over alternative networks including a circuit switched network and a packet network permits changing routing parameters remotely in response to user inputs including user requested changes in chasing parameters. A chase me system permits setting a chase me bit when a call is not immediately deliverable and chasing a subscriber even if the message is to be delivered by converting the message to text for delivery by paging the subscriber. A method of routing via alternative networks a calendar message, predetermined by the user for delivery at a prescribed date and time, may comprise the steps of receiving calendar input information regarding an event and a schedule; composing an event message; and chasing the user according to the reminder schedule and according to a predetermined priority of alternative network locations and terminal configurations to deliver the event message, wherein the alternative networks comprise a circuit-switched network and a packet based network.

First claim

A method of providing alternate routing for a variable bit rate communication between a first terminal and a distant terminal to a broadband subscriber at the first terminal, the variable bit rate communication being a multimedia communication requiring an audio speaker and a video display and related to the degree of utilization of a plurality of different networks, the different networks comprising at least a packet switched network and a circuit-switched network, the method comprising the steps of: i) receiving a multimedia communication at a first terminal and ii) if the called party is not at a premises where the first terminal is located and the called party has authorized chasing service, setting a chasing data bit representing that the called party was not at a primary location and iii) alerting the calling party that the called party is not at the primary location and offering one of messaging service or chasing service to the calling party for the multimedia communication if the chasing data bit is set.

59. HOME NETWORKING GATEWAY

EP1382157A1 | Arris Technology Inc, General Instrument Corp

Bibliographic data

Publication date: 2004-01-21
Application date: 2001-04-26
Earliest priority date: 2001-04-26

Inventors: MOORE RICHARD B JR, BLUM WILLIAM H

CPC classification: H04L 12/2801, H04L 12/2803, H04L 12/2832, H04L 12/2861,
                       H04L 12/2898, H04L 2012/2841, H04L 2012/2845, H04L
                       41/0896, H04L 41/12, H04L 41/5003, H04L 41/5058, H04L
                       69/08, H04W 12/06, H04W 4/18, H04W 80/00, H04W 88/16
IPC classification: H04L 12/24, H04L 12/56, H04L 12/28, H04L 29/06

External links: Google Patents, Espacenet, EP Register,
                       PatBase Express, PatBase, Orbit

Abstract

A home networking gateway provides an interface between an HFC network and an in-home network. Full voice and data connection between the HFC network and each device in the in-home network is provided through the interface. A translator included in the home networking gateway is utilized to provide a mapping between the communication protocols used in the in-home network and the protocols used in the HFC network, eliminating the need for the in-home network to be dependent upon the HFC-specific protocols.

First claim

An arrangement for providing a communication interface between a hybrid fiber coaxial (HFC) network and an in-home communications network, the arrangement comprising: a home networking gateway disposed to communicate with the HFC network and couple communications to the in-home network, the home networking gateway including a translator for mapping between HFC-based communication protocols and in-home network-based protocols, said home networking gateway for performing device discovery and network management of said in-home network; a device database coupled to said home networking gateway and comprising configuration files associated with various in-home telecommunication devices; and a service level agreement database coupled to said home networking gateway and comprising a listing of authorized services for the in-home network, class of service information and quality of service information.

60. Device to terminate a modem relay channel directly to an IP network

US7543063B1 | Cisco Technology Inc

Bibliographic data

Publication date: 2009-06-02
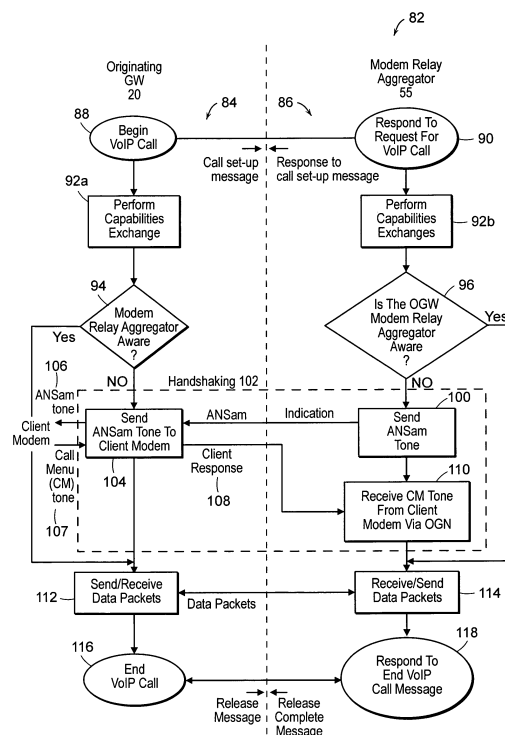Application date: 2002-05-10
Earliest priority date: 2002-05-10

Inventors: GROVE VINCENT T, WILDFEUER HERBERT M, GARAKANI MEHRYAR KHALILI, JUHLIN BRUCE D, BOYNTON SCOTT ANTHONY

CPC classification: H04L 12/2898, H04L 2012/6424, H04L 2012/6481, H04L 65/1026, H04L 65/1036, H04M 7/122

IPC classification: G06F 15/16, H04L 12/28, H04L 29/06, H04M 7/00, H04L 12/64

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A modem data aggregating gateway that supports modem relay functionality for permitting reliable switching of modem traffic between a VoIP network and a data packet switch Internet Protocol (IP) network, s.a. the Internet. The modem relay aggregator may receive modem data encapsulated as Voice over IP (VoIP) data packets in accordance with a Simple Reliable Protocol Transport (SRPT) mechanism. The packet data may be error corrected and/or decompressed before being repackaged for forwarding to the ultimate destination. In the event that the destination is itself an IP device, the modem relay aggregator may forward the packets directly over the IP network. As a result, if the destination of a modem call is an IP device (such as a Web site or other Internet-enabled device) the technique eliminates two points from a processing path in which digital signal processing (DSPs) would otherwise have to perform modem protocol processing. Otherwise, minimal modem reformatting can be performed at the aggregation point.

First claim

A method for terminating a modem session for transporting data across a voice-over-Internet Protocol (VoIP) network using a modem relay (MR) technique, the method comprising:
receiving a modem session packet over a first packet-based network from an originating gateway without handshaking and without sending an indication of an ANSam tone to the originating gateway over the first packet-based network, the modem session packet to transport data represented by modem signals from a client modem in demodulated form;
removing from the modem session packet, headers associated with transporting the data over the first packet-based network;
terminating the modem session and making the data available for further transport over a second packet-based network;
encapsulating the data in an Internet Protocol (IP) packet with a destination address of an IP device for further transport over the second packet-based network;
delivering the IP packet to the IP device over the second packet-based network.

61. IP telephony gateway

EP0966145A2 | Nortel Networks Ltd, Nortel Networks Corp

Bibliographic data

Publication date: 1999-12-22
Application date: 1999-06-21
Earliest priority date: 1998-06-19

Inventors: BRIVET MAYEUL, TRIPPS JOHN, AUBRY
                        ISABELLE

CPC classification: H04L 65/103, H04L 65/104, H04L 65/80, H04M 15/55, H04M
                        2215/2046, H04M 7/0072, H04M 7/125
IPC classification: H04M 7/00

External links: Google Patents, Espacenet, EP Register,
                        PatBase Express, PatBase, Orbit

Abstract

The present invention provides an IP telephony gateway. According to a first aspect of the invention, the gateway provides communications between a switched circuit network (SCN) and an IP network. The gateway can handle calls between clients on the switched circuit network and IP clients on the IP network. The gateway provides supplementary call services/features for calls to/from IP clients on the IP network, thus providing IP clients with similar features to those that are available to terminals on a PBX. The gateway is preferably a PBX which supports the supplementary services/features.

First claim

A gateway for use between between an IP network and another network, the gateway being adapted to handle calls between IP terminal devices connected to the IP network as well as calls between an IP terminal device and a terminal device connected to the other network, the gateway being further adapted to provide at least one supplementary service for calls to or from an IP terminal device.

62. Extending office telephony and network data services to a remote client through the internet

US20020118671A1 | Data Race Inc

Bibliographic data

Publication date: 2002-08-29
Application date: 2001-07-12
Earliest priority date: 1995-11-15

Inventors:	STAPLES LEVEN E, BARKER WILLIAM BENJAMIN, WITT KENNETH L, OLIVER DAVID C
CPC classification:	H04L 2012/6429, H04L 2012/6472, H04L 2012/6475, H04L 51/00, H04L 63/0428, H04L 63/08, H04L 67/14, H04L 69/161, H04L 69/163, H04L 69/164, H04L 69/329, H04M 3/42323, H04M 3/4234, H04M 3/428, H04M 3/54, H04M 7/1205, H04Q 3/0029, H04Q 3/625
IPC classification:	H04L 29/08, H04M 3/42, H04L 12/58, H04L 29/06, H04M 7/00, H04Q 3/00, H04M 3/54, H04M 3/428, H04L 12/64, H04M 7/12, H04Q 3/62
External links:	Google Patents, Espacenet, PatBase Express, PatBase, Orbit
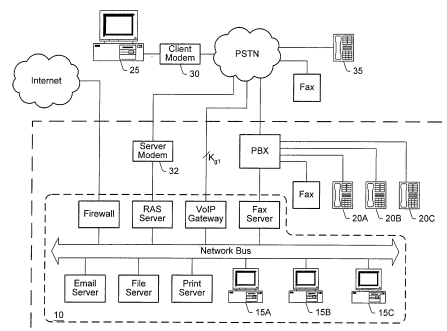
Abstract

A communication system, extends office telephony and network data services to remote clients through the Internet, comprises a telephony server, a local area network, a server system, and a user communication device. The telephony server (e.g. a Private Branch Exchange) provides telephony services for a plurality of office lines. The local area network couples to the Internet. The telephony server and local area network may reside within an office environment. The server system couples to the telephony server and to the local area network. The user communication device establishes a first connection to the server system through the Internet. In response to the first connection, the server system automatically provides access for the user communication device to the telephony server. Also, the server system automatically invokes a call forwarding operation in response to the first connection, so that subsequent telephone calls, intended to reach the user's office line, are forwarded to the server system. When the server system receives a first telephone call, which has been redirected by the telephony server from the user's office line, the server system forwards the first telephone call to the user communication device through the first connection. The user communication device may also establish a secure data connection to the server system through the Internet. The secure data connection provides the remote user with access to the local area network in a manner which protects the data security of the local area network.

First claim

A communication system comprising:
a telephony server configured to provide telephony services for a first plurality of office communication lines;
a local area network coupled to the Internet;
a server system configured for coupling to the telephony server and to the local area network;
a first user communication device situated remotely from the telephony server and the local area network, wherein the first user communication device is configured to establish a first connection to the server system through the Internet;
wherein the server system is further configured to provide access for the first user communication device to the telephony server over the Internet in response to the first user communication device establishing the first connection to the server system; and
wherein the server system is further configured to invoke a call forwarding operation, in response to said first user communication device establishing the first connection to the server system, so that subsequent telephone calls, intended to reach a first office communication line of said first plurality of office communication lines, are forwarded to the server system to be forwarded to the first user communication device over the Internet.

63. Network server platform (NSP) for a hybrid coaxial/twisted pair local loop network service architecture
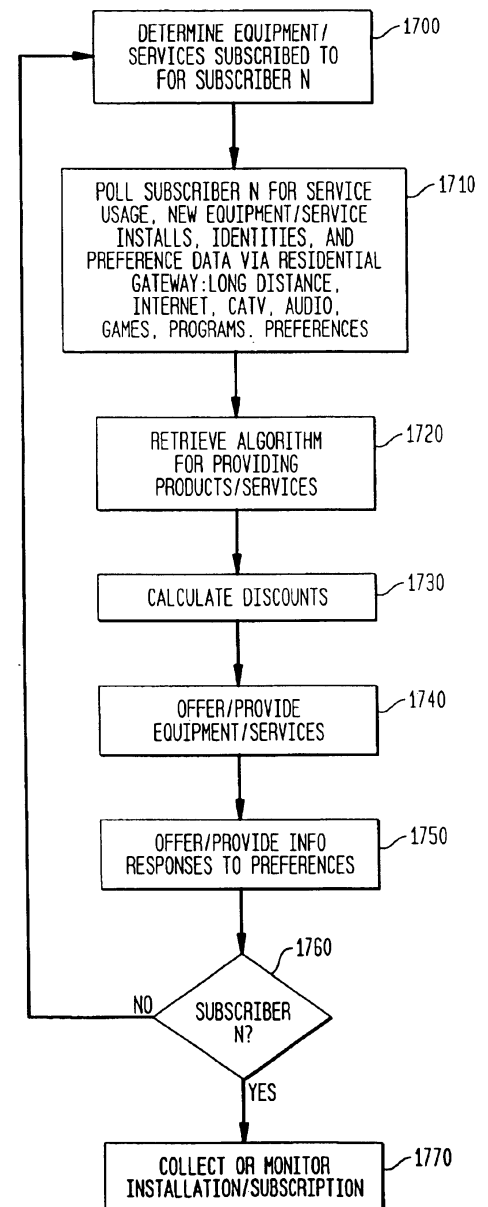
US6850533B2 | AT&T Corp

Bibliographic data

Publication date: 2005-02-01
Application date: 2003-01-17
Earliest priority date: 1997-12-31

Inventors: GERSZBERG IRWIN, MARTIN JEFFREY S, TREVENTI PHILIP ANDREW, WALKER HOPETON S

CPC classification: G06Q 50/188, H04L 12/2801, H04L 12/2856, H04L 12/2872, H04L 12/2876, H04L 12/5692, H04L 12/6418, H04L 2012/5612, H04L 2012/5615, H04L 2012/5663, H04L 41/5054, H04M 11/062, H04M 11/068, H04Q 11/04, H04Q 11/0478, H04W 4/00, H04W 74/00, Y10S 370/906

IPC classification: H04L 12/24, H04L 12/28, H04L 12/54, H04L 12/42, H04M 11/06, H04Q 11/04, H04L 12/64, H04L 12/70

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A twisted pair and/or coaxial cable fed, integrated residence gateway controlled set-top device provides a plurality of services. One service is lifeline service which may be provided over the coaxial cable via a cable modem of the integrated residence gateway or over the twisted pair facility. An integrated residence gateway is coupled to either or both of the coaxial cable or twisted pair and distributes the bandwidth facilities available over either service vehicle to customer devices including a set top box. A network service platform (NSP) is coupled to a cable facilities management platform (FMP) for providing services for cable television subscribers as well as telecommunication service subscribers such that an interexchange or telephone company would control the network services to the subscribers. The NSP architectural concept may permit the interexchange or telephone company to be the single service provider of information to subscribers on an equal basis.

First claim

A method of automatically providing at least one of equipment, services and information to a subscriber to a network service from a network server platform, the method comprising the steps of:

receiving service usage data and user preference data from a subscriber, the service usage data and user preference data including cost and time limitation data relating to at least one of equipment, a service and information, when the service usage data and user preference data relates to equipment, the equipment being at least one of equipment used by the subscriber, equipment requested by the subscriber and equipment preferred by the subscriber, when the service usage data and user preference data relates to a service, the service being at least one of a service used by the subscriber, a service requested by a subscriber and a service preferred by a subscriber, and when the service usage data and user preference data relates to information, the information being at least one of information used by the subscriber, information requested by the subscriber and information preferred by the subscriber;

determining at least one of equipment, a service and information that is one of available and planned based on the received service usage data and user preference data;

automatically providing to the subscriber at least one of equipment, service and information determined based on the received usage data and user preference data.

64. Application-aware, quality of service (QoS) sensitive, media access control (MAC) layer

US6640248B1 | Intellectual Ventures I LLC

Bibliographic data

Publication date: 2003-10-28
Application date: 1999-07-09
Earliest priority date: 1998-07-10

Inventors: JORGENSEN JACOB W

CPC classification: H04L 1/20, H04L 12/1827, H04L 12/1836, H04L 12/189,
                      H04L 47/193, H04L 47/27, H04L 63/0272, H04L 63/0428,
                      H04L 69/161, H04L 69/163, H04L 69/165, H04L 69/169,
                      H04Q 11/0414, H04Q 2213/1305, H04Q 2213/13096, H04Q
                      2213/13097, H04Q 2213/13098, H04Q 2213/13141, H04Q
                      2213/13166, H04Q 2213/13176, H04Q 2213/13196, H04Q
                      2213/13204, H04Q 2213/13216, H04Q 2213/1322, H04Q
                      2213/13292, H04Q 2213/13296, H04Q 2213/13348, H04Q
                      2213/13389, H04W 28/0273, H04W 28/20, H04W 28/26,
                      H04W 72/0453, H04W 72/1242, H04W 8/04, H04W 80/06
IPC classification: H04L 12/56, H04L 12/28, H04L 29/06, H04L 1/20, H04Q
                      11/04, H04L 12/18, H04W 80/06, H04W 28/20, H04W 28/26
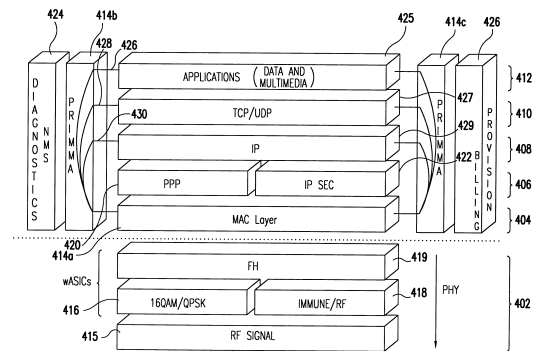
External links: Google Patents, Espacenet, PatBase Express,
                      PatBase, Orbit

Abstract

An application aware, quality of service (QoS) sensitive, media access control (MAC) layer includes an application-aware resource allocator, where the resource allocator allocates bandwidth resource to an application based on an application type. The application type can be based on input from at least one of: a packet header; and an application communication to the MAC layer. The application communication includes: a communication between the application, running on at least one of a subscriber workstation and a host workstation, and the MAC layer, running on at least one of a subscriber CPE station and a wireless base station. The bandwidth resource is wireless bandwidth. The resource allocator schedules bandwidth resource to an IP flow. The IP flow includes at least one of: a transmission control protocol/internet protocol (TCP/IP) IP flow; and a user datagram protocol/internet protocol (UDP/IP) IP flow. The resource allocator in scheduling takes into account resource requirements of at least one of a source application and a destination application of an IP flow. The resource allocator takes into account IP flow identification information extracted from at least one packet header field. The bandwidth resource is wireless bandwidth. The resource allocator allocates switching resource to an application based on an application type. The application type is based on input from at least one of: packet header; and an application communication to the MAC layer. The application communication includes a communication between an application, running on at least one of a subscriber workstation and a host workstation, and the MAC layer, running on at least one of a subscriber CPE station and a wireless base station. The application communication includes a priority class of the IP flow.

First claim

An application aware, quality of service (QoS) sensitive, media access control (MAC) layer comprising:
an application-aware resource allocator at the MAC layer, wherein said resource allocator allocates bandwidth resource to an internet protocol (IP) flow associated with a software application of a user based on IP QoS requirements of said software application, wherein said resource allocator allocates said bandwidth resource in a packet centric manner that is not circuit-centric and does not use asynchronous transfer mode (ATM).

65. System and method for coordinating between multiple telephony channels

US7688803B1 | Individual

Bibliographic data

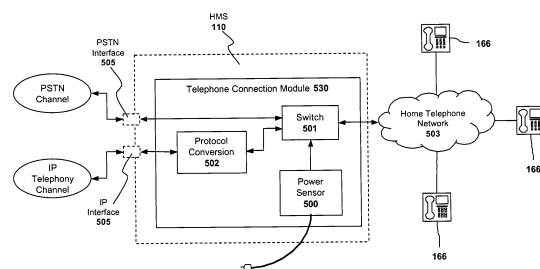Publication date: 2010-03-30
Application date: 2002-09-30
Earliest priority date: 2000-09-01

Inventors: YOUNG STEVEN J, KREIN TODD, PERLMAN STEPHEN G

CPC classification: H04L 65/1026, H04M 7/0057, H04M 7/0069
IPC classification: H04L 12/66

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A system comprising: an IP telephony interface communicatively coupled to an IP telephony service; a secondary telephony interface communicatively coupled to a secondary telephony service; and a telephone connection module to select between the IP telephony service and the secondary telephone service based on one or more specified telephony connection conditions.

First claim

A system comprising:
a server comprising:
an IP telephony interface communicatively coupled to an IP telephony service;
a secondary telephony interface communicatively coupled to a secondary telephony service;
a telephone connection module to select between the IP telephony service and the secondary telephone service based on one or more specified telephony connection conditions
a server RF transmitter communicatively coupled to the telephone connection module and configured to transmit a multimedia signal rendered by the server and based on audio received from the selected telephone service;
a plurality of clients communicatively coupled to the server, each client comprising:
a client RF transmitter to communicatively couple to the server RF transmitter and configured to receive the multimedia signal; and
a microcontroller configured to play back the multimedia signal.

66. Implementation of virtual telephony endpoints in communications gateways

US20030056226A1 | Arris Technology Inc

Bibliographic data
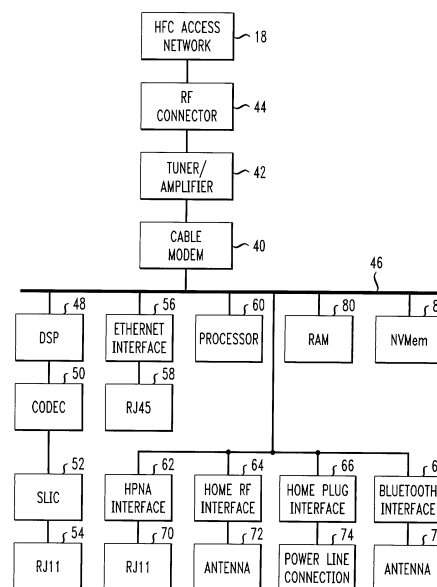Publication date: 2003-03-20
Application date: 2001-09-20
Earliest priority date: 2001-09-20

Inventors: LAZARUS DAVID B, STEIN ROBERT C

CPC classification: H04N 21/43615, H04N 21/4788, H04N 7/17309
IPC classification: H04N 7/173, H04N 21/436, H04N 21/4788

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract
The creation of "virtual telephony endpoints" within a subscriber's location allows for diverse types of telephone sets, connected via different types of communication networks (e.g., PSTN, Ethernet, power line connections, etc.), to be grouped together and perform as "extensions" as in the sense of traditional wired telephone networks, with a "virtual" telephone number assigned to each virtual telephony endpoint (VTEP). The grouping of the telephone sets within each VTEP can be configured and continuously re-configured by the subscriber, as can the number of separate VTEPs within a single location.

First claim
A communications gateway for providing bidirectional communication between an HFC access network and a subscriber location, said subscriber location including telephone sets in communication with a plurality of different telecommunications networks, the communications gateway including
a microprocessor for designating subscriber-determined subsets of said telephone sets as separate virtual telephony endpoints, each virtual telephony endpoint subset associated with a different virtual telephone number such that separate telephone sets associated with different telecommunications networks function as extensions of the same virtual telephone number.

67. System and method for supporting multiple voice channels

US7961712B2 | Broadcom Corp

Bibliographic data

Publication date: 2011-06-14
Application date: 2001-05-08
Earliest priority date: 2000-05-08

Inventors: RABENKO THEODORE F, FISCHER MATTHEW J, LUKAS ROBERT M

CPC classification: H04L 12/4604, H04L 12/66, H04M 11/007, H04M 11/062, H04M 7/0069, H04Q 11/04, H04Q 2213/13034, H04Q 2213/13039, H04Q 2213/13196, H04Q 2213/13202, H04Q 2213/13248, H04Q 2213/13389

IPC classification: H04M 11/00, H04L 12/56, H04L 12/66, H04L 12/46, H04L 29/06, H04M 7/00, H04M 11/06, H04Q 11/04

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
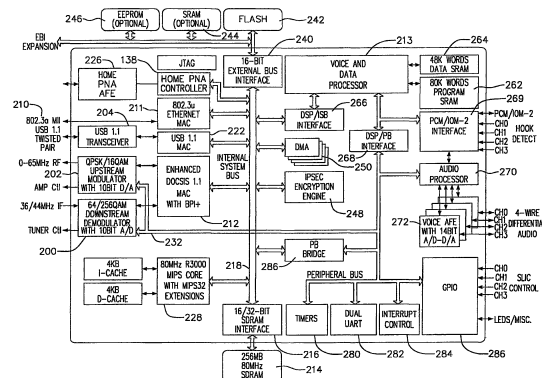
Abstract

A communications system is configured with a plurality of media terminal adapters, a telephone line, and a gateway configured to exchange voice and data packets between a network and each of the media terminal adapters over the telephone line. It is emphasized that this abstract is provided to comply with the rules requiring an abstract which will allow a searcher or other reader to quickly ascertain the subject matter of the technical disclosure. It is submitted with the understanding that it will not be used to interpret or limit the scope or the meaning of the claims.

First claim

A communications gateway, configured to receive a packet payload, the packet payload being formatted according to a first communications protocol, comprising:
a Media Access Controller/Physical Layer Interface (MAC/PHY) configured to determine whether the packet payload is one of a voice packet or a data packet and to translate the packet payload from the first communications protocol to a second communications protocol;
a proxy gateway configured to determine whether the packet payload is to be formatted according to a third communications protocol or a fourth communications protocol when the packet payload is the voice packet;
a controller configured to translate the packet payload from the second communications protocol to the third communications protocol when the packet payload is the voice packet that is to be formatted according to the third communications protocol or is the data packet; and
a processor configured to translate the packet payload from the second communications protocol to the fourth communications protocol when the packet payload is the voice packet that is to be formatted according to the fourth communications protocol.

68. High availability VoIP subsystem

US7012888B2 | Nuasis Corp

Bibliographic data

Publication date: 2006-03-14
Application date: 2003-07-31
Earliest priority date: 2002-08-16

Inventors: SCHOENEBERGER CARL, BROUGHTON
                JUSTIN, DIMITROFF MICHAEL P

CPC classification: H04L 41/065, H04L 41/5003, H04L 41/5064, H04L 51/00,
                     H04L 67/10, H04M 2203/404, H04M 2207/203, H04M 3/523,
                     H04M 3/5233, H04M 3/5235, H04M 7/006
IPC classification: H04L 12/24, H04L 12/56, H04L 12/66, H04L 29/08, H04M
                     5/00, H04M 3/00, H04L 12/58, H04L 29/06, G01R 31/08,
                     H04M 7/00, H04M 3/523

External links: Google Patents, Espacenet, PatBase Express,
   PatBase, Orbit

Abstract

A high availability VoIP system interfacing with a PSTN or other TDM network to provide higher availability and better failure recovery wherein the high availability VoIP system includes a plurality of gateways coupled to at least one hub and a proxy table and a call restoration table configured in each of the plurality gateways. Further, the present invention is a method of providing a high availability VoIP system wherein the method includes configuring a plurality of gateways between a PSTN and at least one hub of the system, implementing a proxy table and a call restoration table in each of the plurality of gateways, wherein when a call is received by a gateway in the plurality of gateways from the PSTN, the call is divided into a session initiation protocol (SIP) portion and a real time protocol (RTP) portion, and further wherein the SIP portion is sent to a proxy server and the RTP portion is sent to a media server, both being located in the at least one hub and further routed to an endpoint such as a SIP controlled softphone. A further method of the present invention includes routing SIP voice calls through the plurality of gateways using a proxy server priority table.

First claim

A high availability voice over internet protocol system coupled to a voice telephony network, comprising:
a. a plurality of gateways configured to receive at least one voice call from the voice telephony network, wherein the plurality of gateways are coupled to at least one hub;
b. a proxy table configured in each of the plurality of gateways, wherein the plurality of gateways send the at least one voice call to one of at least one proxy server; and
c. a call restoration data table configured in each of the plurality of gateways, wherein the call restoration data table provides data to restore a lost voice call of the at least one voice call.
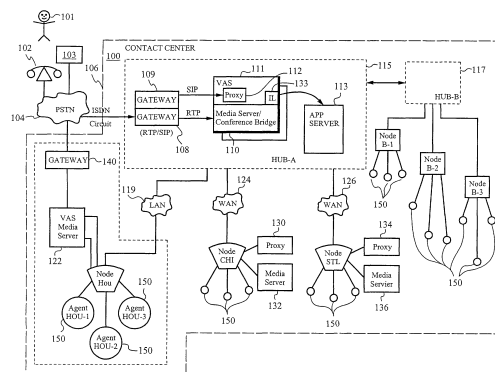
69. Circuit to provide backup telephone service for a multiple service access system using a twisted pair

US6868060B2 | AT&T Corp

Bibliographic data

Publication date: 2005-03-15
Application date: 2001-09-24
Earliest priority date: 1997-12-31

Inventors: BARZEGAR FARHAD, GERSZBERG IRWIN, TREVENTI PHILIP ANDREW

CPC classification: H04M 3/005, H04M 3/12, H04M 3/2209, H04M 3/30
IPC classification: H04M 3/00, H04M 3/30, H04M 3/12

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A system for providing a life line safety connection from a subscriber telephone in a multiple band communication network for customer premise equipment is disclosed. Whenever a failure is detected in any of the systems or components an alternate route through line cards that bypasses digital multiplexing circuits enables a subscriber telephone such as an analog telephone to communicate through plain old telephone lines to outside networks. In some embodiments switches are automatically triggered to activate the life line safety connection. Other embodiments use a selected frequency band for providing the life line safety connection. Failure in external network interfaces as well as in a subscriber server or in customer premise devices can be effectively bypassed by practicing these life line safety connection techniques.

First claim

A multiple access subscriber link providing telecommunications between customer premise equipment and external networks, comprising:
first external network interface facilities having non-dedicated time shared multiplexer components for processing broadband transmission of voice, data and/or signaling;
second external network interface facilities having multiple dedicated line cards for handling narrowband plain old telephone (POT) transmissions;
a subscriber server having interconnections with multiple customer premise devices;
a conductor wire pair with a remote end connected to said first and said second external network interface facilities, and with a local end connected to said subscriber server; and
a subscriber telephone having a safety life line connectable through the conductor wire pair to said second external network interface facilities for providing a backup communication link through said dedicated line cards in said second external network interface facilities when there is a failure of a system or component associated with any of said first external network facilities, said subscriber server, and the customer premise equipment.
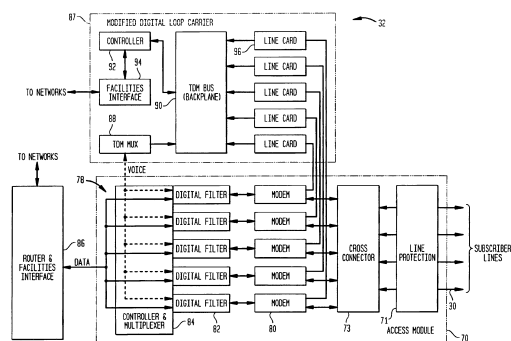
70. ISD CONTROLLED SET-TOP BOX

US20020012353A1 | AT&T Corp

Bibliographic data

Publication date: 2002-01-31
Application date: 1997-12-31
Earliest priority date: 1997-12-31

Inventors: GERSZBERG IRWIN, MARTIN JEFFREY S, WALKER HOPETON S, WALLACE EDWARD L

CPC classification: H04N 21/2221, H04N 21/4143, H04N 21/4185, H04N 21/43632, H04N 21/4788, H04N 7/148
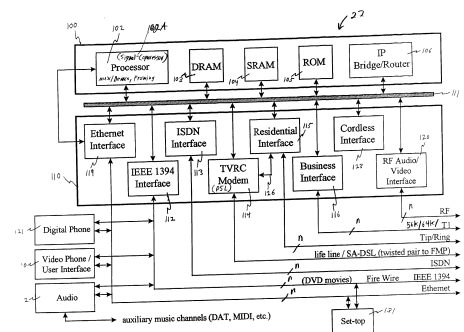IPC classification: H04N 7/14

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract
A DSL telephone connected set-top device.

First claim
A system comprising a caching server downloading multicast data to a plurality of DSL connected multiplexing devices for multiplexing data and voice over a twisted pair wire wherein the device includes a processor functioning as a proxy server.

71. IP-flow characterization in a wireless point to multi-point (PTMP) transmission system

US6590885B1 | Intellectual Ventures I LLC

Bibliographic data

|	
Publication date:	2003-07-08
Application date:	1999-07-09
Earliest priority date:	1998-07-10

Inventors: JORGENSEN JACOB W

CPC classification: H04L 1/20, H04L 12/1827, H04L 12/1836, H04L 12/189, H04L 47/193, H04L 47/27, H04L 63/0272, H04L 63/0428, H04L 69/161, H04L 69/163, H04L 69/165, H04L 69/169, H04Q 11/0414, H04Q 2213/1305, H04Q 2213/13096, H04Q 2213/13097, H04Q 2213/13098, H04Q 2213/13141, H04Q 2213/13166, H04Q 2213/13176, H04Q 2213/13196, H04Q 2213/13204, H04Q 2213/13216, H04Q 2213/1322, H04Q 2213/13292, H04Q 2213/13296, H04Q 2213/13348, H04Q 2213/13389, H04W 28/0242, H04W 28/0273, H04W 28/0289, H04W 28/10, H04W 28/20, H04W 28/24, H04W 28/26, H04W 72/04, H04W 72/1221, H04W 8/04, H04W 80/00, H04W 88/06

IPC classification: H04W 72/04, H04L 12/56, H04L 12/28, H04W 72/12, H04W 80/00, H04W 88/06, H04W 24/00, H04L 29/06, H04L 1/20, H04W 28/24, H04Q 11/04, H04W 28/06, H04L 12/18, H04W 28/20, H04W 28/26

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract
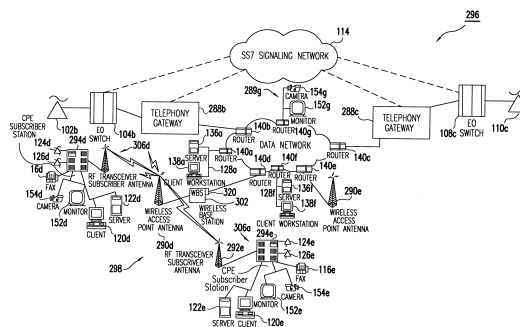
The present invention is directed to a packet-centric wireless point to multi-point telecommunications system, including: a wireless base station coupled to a first data network; one or more host workstations coupled to the first data network; one or more subscriber customer premise equipment (CPE) stations in wireless communication with the wireless base station over a shared bandwidth using a packet-centric protocol; and one or more subscriber workstations coupled to each of the subscriber CPE stations over a second network; a resource allocation device optimizing end-user quality of service (QoS) and allocating shared bandwidth among the subscriber CPE stations; a device for analyzing and scheduling an internet protocol (IP) flow over the shared wireless bandwidth. The analyzing device includes a characterizing device for characterizing the IP flow. The characterizing device can include a device for determining whether a packet is older than a threshold age. The age determining device can include a device for analyzing a time to live (TTL) packet header field for determining the age of the packet, or a device for anticipating application IP flow discards based on the age of the packet. The characterizing device can include a device for determining a QoS requirement for the IP flow if the IP flow is a new IP flow. The characterizing device scan include a device for determining a subscriber CPE identification for a subscriber CPE station associated with the IP flow if the IP flow is a new IP flow.

First claim

A packet-centric wireless point to multi-point telecommunications system comprising:
a wireless base station coupled to a first data network;
one or more host workstations coupled to said first data network;
one or more subscriber customer premise equipment (CPE) stations in wireless communication with said wireless base station over a shared wireless bandwidth using a packet-centric protocol;
one or more subscriber workstations coupled to each of said subscriber CPE stations over a second network;
resource allocation means for optimizing end-user quality of service (QoS) and allocating said shared wireless bandwidth among said subscriber CPE stations; and
analyzing means for analyzing and scheduling an internet protocol (IP) flow over said shared wireless bandwidth, wherein said analyzing means comprises:

characterizing means for characterizing said IP flow.

72. Voice over internet protocol telephone system and method

US6404764B1 | Motorola Inc

**Bibliographic data**

Publication date: 2002-06-11
Application date: 2000-07-18
Earliest priority date: 1998-09-09

Inventors: JONES WESLEY STUART, COTTON TIMOTHY, HOLLAND ROBERT VICTOR

CPC classification: H04L 12/66, H04M 1/2535, H04M 1/725, H04M 3/4285, H04M 3/5307, H04M 3/537, H04M 7/0057, H04M 7/0069
IPC classification: H04M 11/00, H04L 12/28, H04L 29/08, H04M 3/00, H04M 7/00, H04M 1/253, H04M 3/537, H04M 1/725, H04M 3/428, H04M 3/53

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
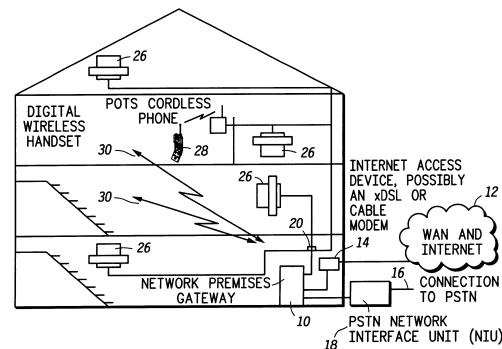
Abstract

An Internet Protocol telephone system and method uses a telephone (26) to place and receive voice over Internet Protocol (VoIP)-based telephone calls and public switched telephone network (PSTN)-based telephone calls. An off-hook condition with the telephone (26) is detected and a sequence of signals generated by the telephone (26) is received. At least a first signal generated by the telephone (26) is buffered while the system attempts to detect a predetermined signal that signifies a VoIP-based call. Upon detection of the predetermined signal, the system intercepts subsequent signals in the sequence, absent the at least first signal that was buffered, and places the VoIP-based call via an internet (12). Otherwise, the system places the PSTN-based call via a PSTN (16).

First claim

In an Internet Protocol telephone using a telephone to place and receive voice over Internet Protocol (VoIP)-based and public switches telephone network (PSTN)-based telephone calls, a method which occurs during a PSTN-based telephone call, the method comprising:

detecting an off-hook condition from the telephone;

receiving a sequence of signals generated by the telephone;

buffering at least a first signal generated by the telephone;

attempting to detect a predetermined signal that signifies a VoIP-based call; and

intercepting subsequent signals in the sequence, absent the at least first signal that was buffered, and placing the VoIP-based call via an internet when the predetermined signal is detected.

73. Small office or home office (SOHO) IP phone service

US8605711B1 | Verizon Business Global LLC

Bibliographic data

Publication date: 2013-12-10
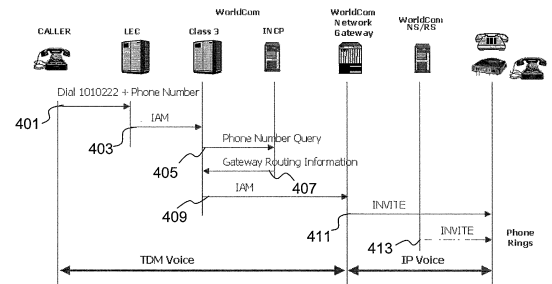Application date: 2001-12-17
Earliest priority date: 2001-12-17

Inventors: SINNREICH HEINRICH, JOHNSTON ALAN BERNARD, LASS STEVEN LEE

CPC classification: H04M 7/0033, H04M 7/006, H04M 7/126, H04M 7/1295
IPC classification: H04L 12/66, H04M 7/00

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

An approach for supporting telephony services for use over a data network that includes at least one of the Internet and a private Intranet is disclosed. A communications system includes a switch that is coupled to a telephone network and is configured to determine presence of a dialing prefix of a call. The system also includes a gateway that is coupled to the data network and configured to communicate with the switch. The switch selectively routes the call based upon the presence of the dialing prefix to the gateway.

First claim

A method for supporting telephony services for use over a data network, the method comprising:

determining presence of a dialing prefix of a call originating from a telephone network including a first switch and a second switch, wherein the dialing prefix specifies routing from the first switch to the second switch for treatment of the call, the first switch routing the call to the second switch via an initial address message (IAM) in a signaling channel;

selectively routing the call from the second switch based upon the presence of the dialing prefix to a Session Initiation Protocol (SIP) gateway that interfaces with the data network, wherein the second switch queries an intelligent network control platform, which returns routing information for the SIP gateway, wherein the second switch sends an IAM message to the SIP gateway, and wherein the SIP gateway sends a SIP INVITE message to an appropriate SIP server;

forwarding the SIP INVITE message by the SIP server over the data network to an adapter device resident within a customer premise and coupled to a destination voice station, the adapter device configured to conduct SIP voice communication over the data network and configured to conduct voice communication over the telephone network.

74. TCP/IP packet-centric wireless transmission system architecture

EP1796305B1 | Intellectual Ventures I LLC

Bibliographic data

Publication date: 2016-02-17
Application date: 2000-07-07
Earliest priority date: 1999-07-09

Inventors:	JORGENSEN JACOB W
CPC classification:	H04L 1/20, H04L 12/1827, H04L 12/1836, H04L 12/189, H04L 12/28, H04L 47/193, H04L 47/27, H04L 63/0272, H04L 69/161, H04L 69/163, H04L 69/165, H04L 69/169, H04Q 11/0414, H04Q 2213/1305, H04Q 2213/13096, H04Q 2213/13097, H04Q 2213/13098, H04Q 2213/13141, H04Q 2213/13166, H04Q 2213/13176, H04Q 2213/13196, H04Q 2213/13204, H04Q 2213/13216, H04Q 2213/1322, H04Q 2213/13292, H04Q 2213/13296, H04Q 2213/13348, H04Q 2213/13389, H04W 28/02, H04W 28/20, H04W 28/26, H04W 72/04, H04W 72/1247, H04W 80/06
IPC classification:	H04W 72/04, H04L 12/56, H04L 12/28, H04M 3/00, H04L 29/06, H04L 1/20, H04Q 11/04, H04L 12/18, H04W 28/04, H04W 80/06, H04W 28/20, H04W 28/26
External links:	Google Patents, Espacenet, EP Register, PatBase Express, PatBase, Orbit

Abstract

A packet-centric wireless point to multi-point telecommunications systems includes: a wireless base station communicating via a packet-centric protocol to a first data network; one or more host workstations communicating via the packet-centric protocol to the first data network; one or more subscriber customer premise equipment (CPE) stations coupled with the wireless base station over a shared bandwidth via the packet-centric protocol over a wireless medium; and one or more subscriber workstations coupled via the packet-centric protocol to each of the subscriber CPE stations over a second network. The packet-centric protocol can be transmission control protocol/internet protocol (TCP/IP). The packet-centric protocol can be a user datagram protocoi/internet protocol (UDP/IP). The system can include a resource allocation means for allocating shared bandwidth among the subscriber CPE stations. The resource allocation is performed to optimize end-user quality of service (QoS).

First claim

An application aware resource allocator (414b,414c) for a packet switched network comprising a media access control, MAC, layer (414a),
wherein the resource allocator (414b,414c) allocates bandwidth resource to internet protocol, IP, flows associated with software applications (425) of users based on IP quality of service, QoS, requirements of the respective software applications (425), and
wherein the resource allocator (414b,414c) allocates bandwidth resource by communicating the QoS requirement associated with each IP flow to the MAC layer (414a) so that the IP flows associated with each software application (425) are switched to their appropriate destinations in order of priority.

75. User communication hub for use with an analog phone line

US6993011B1 | Sprint Communications Co LP

Bibliographic data

Publication date: 2006-01-31
Application date: 2000-08-30
Earliest priority date: 1997-04-04

Inventors: KAPLAN MARTIN JOSEPH, DENAP FRANK ANTHONY, STRAND III JOHN ARNDT, EDWARDS WILLIAM LEE, GORMAN BRYAN LEE, BOG MURAT, SWINK MICHAEL THOMAS, JOHNSON HAROLD WAYNE

CPC classification: H04L 12/66, H04L 2012/561, H04L 2012/5615, H04L 2012/5671, H04M 11/062, H04Q 11/0478

IPC classification: H04L 12/56, H04L 12/66, H04M 11/06, H04Q 11/04

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
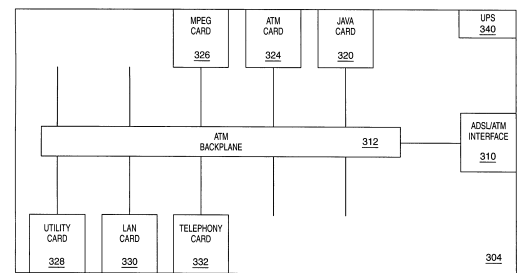
Abstract

The invention is a residential communication hub for a communication system that provides communications services to an end-user. The residential hub is connected to the communications system over a DSL connection. The residential hub converts voice traffic to ATM for transmission over the DSL connection. The communications system includes broadband networks and a service node to facilitate communications services for the end-user.

First claim

A user communication hub for providing communications services to an end user at a user location, wherein the user communication hub comprises:
a plurality of communication interfaces that are operational to communicate with a plurality of end-user communication devices that are located at the user location and that use a plurality of communications formats, wherein the communication interfaces are operational to convert between the communications formats and an ATM format, wherein at least one of the communication interfaces comprises an analog telephony interface that communicates with a telephone that is located at the user location and that uses an analog telephony format, wherein the analog telephony interface is operational to convert between the analog telephony format and the ATM format;
a Asynchronous Digital Subscriber Line (ADSL) interface that is coupled to the communications interfaces and a communication system and said ADSL interface is operational to communicate with the communication system using an ADSL with ATM over DSL format.

76. Packet-switched telephony call server

US9350767B2 | Skype Ltd Ireland

Bibliographic data

Publication date: 2016-05-24
Application date: 2011-06-24
Earliest priority date: 2001-05-31

Inventors: NIX JOHN A, MUMMA JEFFREY S

CPC classification: H04L 12/56, H04L 12/66, H04L 29/06027, H04L 65/1069, H04M 1/2535, H04M 7/127, H04W 12/06

IPC classification: H04J 3/16, H04J 3/22, H04L 12/66, H04L 29/06, H04M 7/00, H04L 12/50, H04L 12/54, H04M 7/12

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
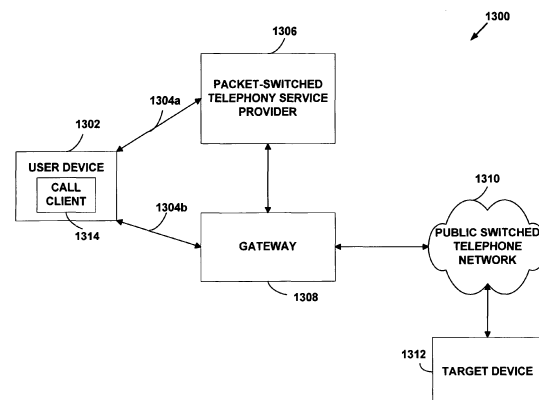
Abstract

A system and method for providing packet-switched telephony service. The system provides call control, signaling, and/or delivery of voice, video, and other media in substantially real time. One embodiment of the system includes a call client application on a user device, and a call server located at a packet-switched telephony service provider. The call server is preferably operable to communicate with the call client in a non-native protocol and with the gateway in a native protocol.

First claim

A method comprising:

registering a user device with a packet switched telephony service provider (PTSP);

receiving a call request at the PTSP according to a non-native protocol from the user device, wherein the non-native protocol is non-native to a gateway and the call request includes a telephone number corresponding to a public-switched telephone network (PSTN) subscriber;

translating the call request from the non-native protocol to a native protocol that is native to the gateway and prior to transmitting the call request to the gateway;

transmitting the translated call request from the PTSP to the gateway according to the native protocol, wherein the gateway forwards the call request to the PSTN subscriber;

causing a call to be established between the user device and the PSTN subscriber;

sending media data for the call between the user device and the PSTN subscriber via a first communication channel;

sending call control data for the call via a second communication channel different than the first communication channel, the call control data including call ping data sent while the call is in progress.

77. Remote monitoring through the BRG

EP1115264A2 | AT&T Corp

Bibliographic data

Publication date: 2001-07-11
Application date: 2000-12-22
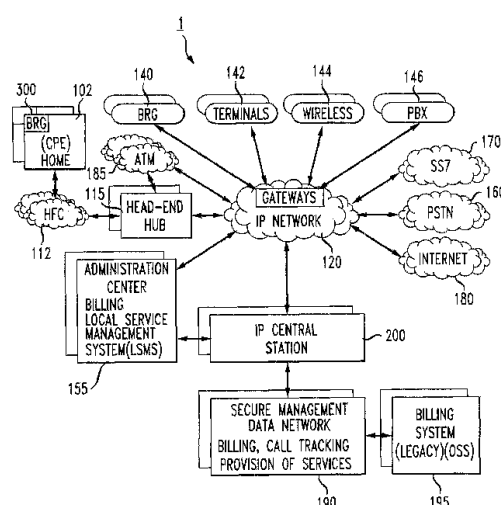Earliest priority date: 1999-12-30

Inventors: KUNG FEN-CHUNG, RUSSELL JESSE
EUGENE, SANKALIA ANISH, WANG SPENCER

CPC classification: H04L 2012/5626, H04Q 11/0478
IPC classification: H04Q 11/04, H04L 12/70

External links: Google Patents, Espacenet, EP Register,
PatBase Express, PatBase, Orbit

FIG. 1

Abstract

The present invention provides for customer premises remote monitoring for use in a powerful, facilities-based, broadband communications system that guarantees voice, data and video communication reliability and security to users for an multimedia system including integrated telephone, television and data network. The remote monitoring service enables, for example, the environment of the system subscriber's customer premises of to be monitored from a remote location by those authorized by the subscriber. Further, customer premises equipment usage may be monitored. The customer premises equipment, such as a broadband residential gateway (BRG) may be equipped with a microphone(s) and camera(s) (possibly including a speaker(s)) and the system, for example, the BRG and IP Central Station may be configured to allow active monitoring of a the customer premises from a remote location. Rather than including a microphone and camera (with or without a speaker(s)) for the BRG, the remote monitoring feature may be constructed to operate on a multimedia personal computer (PC) connected to the BRG. The remote monitoring may be performed even if one of the users telephones is off the hook by configuring the customer premise equipment to work independent of telephone status. The remote monitoring information may be seen and heard in real time or saved to memory. As such, the system may also be configured to store all the video and/or audio during a monitoring period on a storage device at the subscriber's residence (e.g., VCR, digital disk, etc.), in a storage system at IP Central Station, or at any third party location such as a security service. The remote monitoring feature may be configured with emergency remote monitoring capability so that in response to someone at the customer premises dialing 911 the police, fire department, or any other designated party or telephone number, the system may automatically provided monitoring capabilities to emergency personnel. The system may be configured with a remote monitoring lockout feature for user privacy. Further, the emergency remote monitoring (e.g., 911) feature may be configured to automatically override an active lockout so that emergency personnel can monitor the premises in response to an emergency call. The remote monitoring feature may be used to notify a subscriber that a telephone is off-ho

First claim

A method for providing remote monitoring in an integrated broadband communication system, comprising the steps of:
receiving a request from a user located at a remote location;
activating monitoring activity at a customer premises based on receiving said request from said user located at said remote location.

78. Reservation based prioritization method for wireless transmission of latency and jitter sensitive IP-flows in a wireless point to multi-point transmission system

US6628629B1 | Intellectual Ventures I LLC

Bibliographic data

Publication date: 2003-09-30
Application date: 1999-07-09
Earliest priority date: 1998-07-10

Inventors: JORGENSEN JACOB W

CPC classification: H04L 1/20, H04L 12/1827, H04L 12/1836, H04L 12/189, H04L 47/193, H04L 47/27, H04L 63/0272, H04L 63/0428, H04L 69/161, H04L 69/163, H04L 69/165, H04L 69/169, H04Q 11/0414, H04Q 2213/1305, H04Q 2213/13096, H04Q 2213/13097, H04Q 2213/13098, H04Q 2213/13141, H04Q 2213/13166, H04Q 2213/13176, H04Q 2213/13196, H04Q 2213/13204, H04Q 2213/13216, H04Q 2213/1322, H04Q 2213/13292, H04Q 2213/13296, H04Q 2213/13348, H04Q 2213/13389, H04W 28/0273, H04W 28/26, H04W 72/0446, H04W 72/1247, H04W 8/04, H04W 80/06

IPC classification: H04W 72/04, H04L 12/56, H04L 12/28, H04W 72/12, H04L 29/06, H04L 1/20, H04W 74/00, H04Q 11/04, H04L 12/18, H04W 80/06, H04W 28/20, H04W 28/26

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
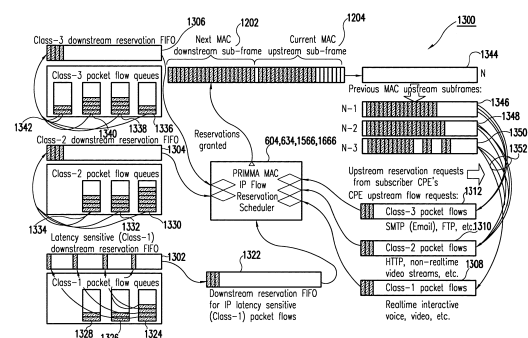
Abstract

A wireless telecommunications network having superior quality of service is provided. A system and method for assigning future slots of a transmission frame to a data packet in the transmission frame for transmission over a wireless telecommunication network system includes applying an advanced reservation algorithm, reserving a first slot for a first data packet of an internet protocol (IP) flow in a future transmission frame based on the algorithm, reserving a second slot for a second data packet of the IP flow in a transmission frame subsequent in time to the future transmission frame based on the algorithm, wherein the second data packet is placed in the second slot in an isochronous manner to the placement of the first data packet in the first slot. There may be a periodic variation between the placement of the first data packet in the first slot and the placement of second data packet in the second slot or no periodic variation between placements of slots. The advanced reservation algorithm makes a determination whether the IP flow is jitter-sensitive.

First claim

A method for assigning future slots of a transmission frame to a data packet in the transmission frame for transmission over a wireless medium, comprising:
applying a reservation algorithm;
reserving a first slot for a first data packet of an internet protocol (IP) flow in a future transmission frame based on said reservation algorithm;
reserving a second slot for a second data packet of said IP flow in a transmission frame, subsequent in time to said future transmission frame based on said reservation algorithm,
wherein said second data packet is placed in said second slot in an isochronous manner to the placing of said first data packet in said first slot.

79. Terminal connection device, connection control device, and multi-function telephone terminal

US7457278B2 | SoftBank Corp

Bibliographic data

Publication date: 2008-11-25
Application date: 2005-07-08
Earliest priority date: 2002-05-31

Inventors: SON MASAYOSHI, KUROBE MITSUO

CPC classification: H04L 12/66, H04L 65/103, H04L 65/104, H04L 65/1043, H04L 65/1069, H04L 65/80, H04M 1/2535, H04M 1/72502, H04M 3/12, H04M 3/2218, H04M 7/0057, H04M 7/006, H04M 7/0069, H04W 40/14, H04W 76/18, H04W 88/06, H04W 88/14, H04W 88/16, H04W 92/02, H04W 92/06

IPC classification: H04L 29/06, H04M 3/22, H04W 88/16, H04M 3/08, H04M 7/00, H04W 76/02, H04M 1/253, H04W 92/02, H04L 12/22, H04M 1/725, H04W 88/14, H04M 3/12

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
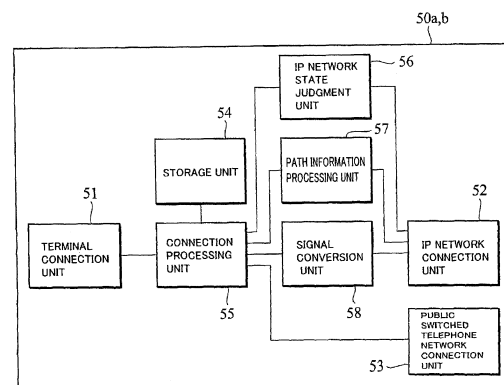
Abstract

The VoIP gateway in accordance with the present invention serves to send a connection request to either the IP network or the PSTN on the basis of the information stored in the VOIP gateway and the destination telephone number contained in the connection request as sent from the telephone terminal. Also, even if a connection request is decided to be sent to the IP network, the VOIP gateway sends the connection request to the PSTN when the IP network state judgment unit judges that the communication through the IP network is impossible. Furthermore, if a destination telephone number includes predetermined identification information, the VOIP gateway can forcibly send the connection request to the PSTN.

First claim

A terminal connection device that is connectable to a packet network for transmitting and receiving packet data, a public switched telephone network for transmitting and receiving voice band signals, and a communication terminal for sending a connection request which contains a telephone number of a destination, said terminal connection device comprising:

a connection processing unit configured to send said connection request to one of said packet network and said public switched telephone network on the basis of the telephone number of said destination contained in the connection request;

a packet network state judgment unit configured to judge whether or not a communication is viable through said packet network; and

a storage unit configured to store information about telephone numbers of destinations to which communication is only established through the public switched telephone network as a PSTN route-around table,

wherein said connection processing unit is configured to compare the telephone numbers as in the connection request with the PSTN route-around table stored in the storage unit before a judgment by said packet network state judgment unit,

if the telephone number matches one of the telephone numbers in the PSTN route-around table, the connection processing unit sends the connection request to said public switched telephone network,

if the telephone number does not match any of telephone numbers as listed in said PSTN route-around table and said packet network state judgment unit judges that a communication is not viable through said packet network, said connection processing unit sends said connection request to said public switched telephone network even if it is decided to send said connection request to said packet network, and

if the telephone number does not match any of telephone numbers as listed in the PSTN route-around table and said packet network state judgment unit judges that a communication is viable through said packet network, said connection processing unit sends said connection request to said packet network.

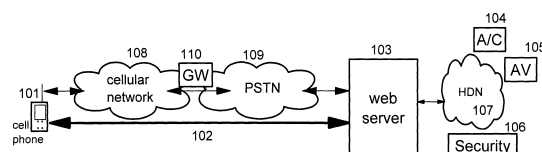# 80. Pervasive, personal data interactivity over voice-grade circuit-switched cellular networks

US7899912B2 | International Business Machines Corp

Bibliographic data
Publication date: 2011-03-01
Application date: 2001-08-21
Earliest priority date: 2001-08-21

Inventors: BISDIKIAN CHATSCHIK, JEROME WILLIAM F,
                        NAGHSHINEH MAHMOUD

CPC classification: H04L 67/04, H04L 69/329
IPC classification: G06F 15/16, H04L 29/08, H04L 29/06

External links: Google Patents, Espacenet, PatBase Express,
                        PatBase, Orbit

Abstract
Provides methods and apparatus for accessing and controlling services, such as home automation services, visually employing established wireless, cellular telecommunication technologies for voice communications. In example embodiments, users of personal portable devices connect to services over dial-up, wireless, cellular, circuit-switched voice telephone networks, receive and display listings of available services and use these listings to access and manipulate the services.

First claim
A service interaction method comprising a user interacting with at least one remote service accessible through a home data distribution network, said home data distribution network comprising an aggregation of at least one communications media and at least one communications protocol used to access said at least one remote service from a serving entity, the step of interacting comprising: enabling remote control of services at a residential network without the necessity of a service provider; employing only a circuit-switched, voice telephony network comprising a cellular, circuit-switched, voice telephony network one of a cellular voice network and a PSTN, said user connecting to a telephone modem in a serving entity, the serving entity attached to said home data distribution network only using a cellular phone attached to the circuit switched, voice telephony network comprising a cellular, circuit-switched, voice telephony network a wireless, circuit switched, voice telephony network, enabling remote control of services at the home data distribution network only by the circuit-switched, voice telephony network comprising a cellular circuit switched network; obtaining and viewing a list of at least one remote service from accessible remote services from said serving entity accessible remotely via said home network from said serving entity using at least one of said communications media and one of said communications protocols; selecting said at least one remote service from said list; selecting said at least one communications media and at least one communications protocol that said at least one remote service uses; and accessing and viewing said at least one remote service in obtaining desired results.

81. Multifunction interface facility connecting wideband multiple access subscriber loops with various networks

US6363079B1 | AT&T Corp

Bibliographic data

Publication date: 2002-03-26
Application date: 1997-12-31
Earliest priority date: 1997-12-31

Inventors: BARZEGAR FARHAD, GERSZBERG IRWIN, TREVENTI PHILIP ANDREW

CPC classification: H04L 12/2856, H04L 12/2883, H04L 12/2896, H04M 11/062
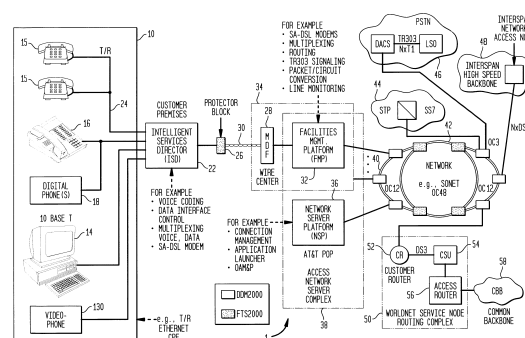IPC classification: H04L 12/28, H04L 12/66, H04M 11/06

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

An device, called a facilities management platform (FMP) connects current digital and analog carrier networks and packet switched networks of interexchange carriers with high speed multiple access subscriber links implemented over twisted pair lines. The subscriber line is terminated by an access module containing one or more modems. In preferred embodiments, the modems are high-speed digital tethered virtual radio channel or xDSL modems. The FMP interface applies and receives signaling and voice through a digital loop carrier (DLC) via a multiplexer connected directly to the DLC backplane. The multiplexer is controlled by a controller of an access module. It translates data from the subscriber link to the form compatible with the digital backplane to create the appearance of one or more line cards. The FMP also may contain a sound generator to allow it to handle calls through an analog carrier network. The FMP, through the same access module transmits data to and from the modems directly through connected digital networks, such as ATM or SONET, of an interexchange carrier. Through this interface, different network companies can offer competing products through different networks all seamlessly connected through a high speed subscriber line.

First claim

A telecommunications interface for communicating subscriber data including voice, signaling, and user data between (1) a digital network, (2) a digital loop carrier (DLC) having an analog interface to connect telephones and a digital circuit connecting a telephone switch to other telephone switches, and (3) a subscriber link to equipment at a subscriber's premise, said interface comprising:
a modem configured to modulate and demodulate said subscriber data to and from said subscriber link to generate a digital stream containing said voice, signaling, and user data;
a digital filter configured to separate said voice data from said digital stream;
a controller programmed to apply said voice data to said digital circuit when said signaling data indicates said voice data is to be transmitted by said digital circuit and further programmed to apply said voice data to said digital network when said signaling data indicates said voice data is to be transmitted over said digital network;
wherein said digital loop carrier has, connected to said digital circuit, a terminating multiplexer to which said subscriber link may be connected, said terminating multiplexer converting analog telephone signals from said subscriber link to a DLC digital format and applying the converted telephone signals to said digital circuit; and
a multiplexer, controlled by said controller and connectable to said digital circuit, configured to generate data in said DLC format providing substantially an appearance to said backplane of another terminating multiplexer, whereby said voice data may be applied to said digital circuit when said signaling data indicates said voice data is to be transmitted by said digital circuit.

82. System and method for a directory service supporting a hybrid communication system architecture

US6754181B1 | MCI Communications Corp

Bibliographic data
Publication date: 2004-06-22
Application date: 1996-11-18
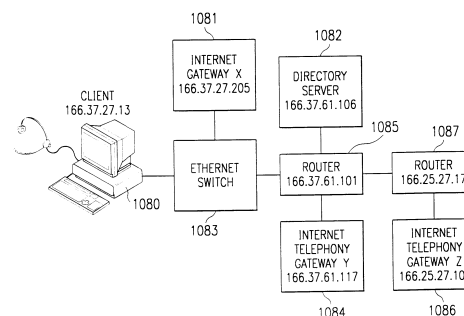Earliest priority date: 1996-11-18

Inventors: ELLIOTT ISAAC K, KRISHNAWSWAMY
                        SRIDHAR

CPC classification: H04L 12/66, H04L 65/1043, H04M 7/1285
IPC classification: H04L 12/66, H04L 29/06, H04M 7/00

External links: Google Patents, Espacenet, PatBase Express,
                        PatBase, Orbit

Abstract
Telephone calls, data and other multimedia information is routed through a hybrid network which includes transfer of information across the internet utilizing telephony routing information and internet protocol address information. A media order entry captures complete user profile information for a user. This profile information is utilized by the system throughout the media experience for routing, billing, monitoring, reporting and other media control functions. Users can manage more aspects of a network than previously possible, and control network activities from a central site. A directory service that supports a hybrid communication system architecture is provided for routing traffic over the hybrid network and the internet.

First claim
A method for routing a media communication to an internet telephony gateway in a hybrid network comprising:
receiving a request from a client computer by a directory service for a list of one or more candidate internet telephony gateways;
accessing a database of a plurality of internet telephony gateways;
selecting by the directory service one or more candidate internet telephony gateways from the database based on a set of criteria;
transmitting a message to each of the one or more candidate internet telephony gateways from the database which were selected based on a set of criteria wherein the message instructs the candidate internet telephony gateways to ping the client computer;
receiving the ping results from the candidate internet telephony gateways;
ranking the order of the candidate internet telephony gateways based on the ping results;
transmitting the list of the one or more candidate internet telephony gateways to the computer client.

83. A METHOD AND SYSTEM FOR TELEPHONY AND HIGH SPEED DATA ACCESS ON A BROADBAND ACCESS NETWORK

WO1999039541A2 | AT & T CORP

Bibliographic data
Publication date: 1999-08-05
Application date: 1999-01-29
Earliest priority date: 1998-01-30

Inventors: BELLOVIN STEVEN MICHAEL, CONDON
                     JOSEPH HENRY, COX RICHARD
                     VANDERVOORT, FRASER ALEXANDER
                     GIBSON, KALMANEK CHARLES ROBERT,
                     KAPLAN ALAN EDWARD, KILLIAN THOMAS
                     JOSEPH, MARSHALL WILLIAM TODD,
                     ONUFRYK PETER Z, RAMAKRISHNAN
                     KADANGODE K, SCHRYER NORMAN LOREN

CPC classification: H04L 2012/561, H04L 2012/5615, H04L 2012/5618, H04L
                     2012/5671, H04L 2012/6427, H04L 2012/6443, H04L
                     2012/6475, H04L 2012/6486, H04Q 11/0478
IPC classification: H04Q 11/04, H04L 12/64, H04L 12/70

External links: Google Patents, Espacenet, EP Register,
                     Patentscope, PatBase Express, PatBase, Orbit
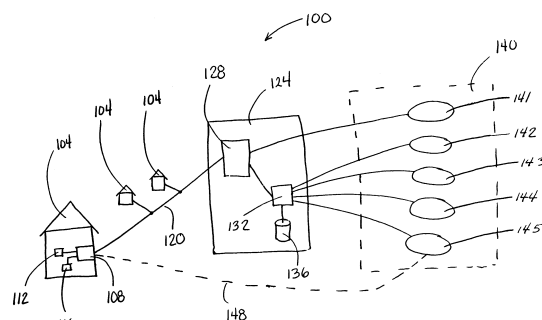
Abstract
A system and method for providing telephony and high speed data access on a broadband access network, comprising a network interface unit (NIU) coupled to a backup local exchange carrier (LEC) line, the broadband access network coupled to the NIU, an intermediate point-of-presence (IPOP) coupled to the broadband access network, and at least one external access network coupled to the IPOP. The NIU comprises a broadband telephone interface (BTI) which is coupled to at least one telephone. When the broadband access network is unavailable, the BTI switches the at least one telephone to the backup LEC line.

First claim
A broadband telephone interface (BTI) for use in a system for telephony and high speed data access on a cable network, comprising: a first interface coupled to a backup telephone service; a second interface coupled to at least one telephone; a third interface coupled to a cable modem, the cable modem being coupled to the cable network; and a relay, wherein during availability of the cable network the second interface is coupled to the third interface and wherein during unavailability of the cable network, the relay couples the first interface to the second interface.

84. Cable connected wan interconnectivity services for corporate telecommuters

US6452923B1 | AT&T Corp

Bibliographic data

Publication date: 2002-09-17
Application date: 1998-12-31
Earliest priority date: 1998-12-31

Inventors: GERSZBERG IRWIN, MARTIN JEFFREY S, TREVENTI PHILIP ANDREW, WALKER HOPETON S, WALLACE EDWARD L

CPC classification: H04N 21/2143, H04N 21/25891, H04N 21/26291, H04N 21/43615, H04N 21/6118, H04N 21/6168, H04N 21/8173, H04N 7/106, H04N 7/108, H04Q 11/04, H04Q 2213/13039, H04Q 2213/13093, H04Q 2213/13096, H04Q 2213/13097, H04Q 2213/1313, H04Q 2213/13179, H04Q 2213/1319, H04Q 2213/13196, H04Q 2213/13202, H04Q 2213/13203, H04Q 2213/13204, H04Q 2213/13216, H04Q 2213/13224, H04Q 2213/13298, H04Q 2213/13299, H04Q 2213/13332, H04Q 2213/13367, H04Q 2213/13383, H04Q 2213/13389

IPC classification: H04Q 11/04, H04N 21/61, H04N 21/258, H04N 21/262, H04N 21/214, H04N 21/436, H04N 21/81

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A twisted pair and/or coaxial cable fed, integrated residence gateway controlled set-top device provides a plurality of services. One service is lifeline service which may be provided over the coaxial cable via a cable modem of the integrated residence gateway or over the twisted pair facility. An integrated residence gateway is coupled to either or both of the coaxial cable or twisted pair and distributes the bandwidth facilities available over either service vehicle to customer devices including a set top box. For corporate telecommuters who work from home, a greater variety of services is available. The greater bandwidth of the cable network allows for the faster exchange of information between home and office, allowing the employee working at home to function as if he or she were actually at the office. Individual pieces of equipment connected to the telecommuter's home may be addressed, so that phone and message forwarding may be properly forwarded to the telecommuter's home. Dynamic allocation of the bandwidth available on the cable network allows cable head ends to provide multiple tiers, or levels, of service such that the higher service tiers are less likely to lose bandwidth when traffic increases. Advanced billing options automatically bill the employer for costs associated with telephone calls placed from the telecommuter's home.

First claim

A method for allowing an employee to access an employer's office network to work from home, comprising the steps of:

responsive to receiving outgoing data signals from one or more pieces of equipment associated with the employee's home, an integrated residence gateway converting said outgoing data signals into outgoing packets and transmitting said outgoing packets to a head end via a cable network;

responsive to receiving said outgoing packets, said head end transmitting said outgoing packets to said office network;

responsive to receiving incoming packets from said office network, said head end transmitting said incoming packets to said integrated residence gateway;

responsive to receiving said incoming packets, said integrated residence gateway converting said incoming packets into incoming data signals, and distributing said incoming data signals to one or more of said pieces of equipment, wherein the transmission of said incoming and outgoing packets forms a data connection between the employee's integrated residence gateway and the office network, further comprising the steps of:

receiving a request from the employee to reverse the charges for the data connection;

consulting a database to determine whether the employer has agreed to pay for the data connection;
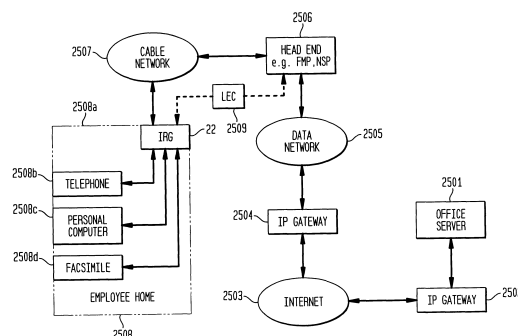
billing said employer, and not the employee, for the cost of the data connection.

85. Dual-mode telephone for cordless and cellular networks

EP0876073A2 | AT&T Corp

Bibliographic data

Publication date: 1998-11-04
Application date: 1998-05-01
Earliest priority date: 1997-05-01

Inventors: GERSZBERG IRWIN, JAVITT JOEL I, MARTIN
                       JEFFREY S, MILLER ROBERT RAYMOND II,
                       WALKER HOPETON S, WALLACE EDWARD L

CPC classification: H04M 1/57, H04M 1/725, H04W 88/06
IPC classification: H04W 88/06, H04M 1/57, H04M 1/725, H04M 1/247

External links: Google Patents, Espacenet, EP Register,
                       PatBase Express, PatBase, Orbit

Abstract

A cordless telephone network for wirelessly linking with a wireless phone. The cordless telephone network may include a plurality of wireless base stations, the base stations preferrably being disposed at customer premises such as private residences and/or businesses. A wireless phone linked to the cordless telephone network may roam between the wireless base stations and/or between the cordless telephone network and any other wireless network such as a conventional cellular phone network.

First claim

A phone characterized in that the phone is configured to roam between a plurality customer premise base stations utilizing at a first set of frequencies and a plurality of cellular base stations utilizing a second set of frequencies different from the first set of frequencies.

86. SIMULTANEOUS, TRANSPARENT USE OF A TELEPHONE LINE FOR VOICE AND DATA COMMUNICATIONS

WO2002058352A1 | PHONE MARKETING LLC I, SOBEK MICHAEL F, WINTERS CHARLES B

Bibliographic data
Publication date: 2002-07-25
Application date: 2002-01-14
Earliest priority date: 2001-01-16

Inventors: SOBEK MICHAEL F, WINTERS CHARLES B

CPC classification: H04L 12/66, H04L 2212/00, H04L 41/06, H04L 41/0806, H04L 41/0853, H04L 65/103, H04L 65/104, H04L 65/1043, H04L 65/1069, H04M 2207/20, H04M 7/0027

IPC classification: H04L 12/24, H04L 12/28, H04L 12/26, H04L 12/66, H04L 29/06, H04M 7/00

External links: Google Patents, Espacenet, EP Register, Patentscope, PatBase Express, PatBase, Orbit
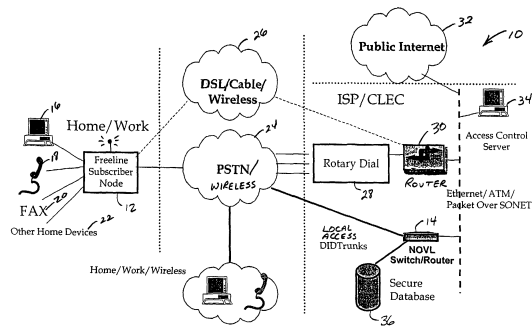
Abstract
In one embodiment, a method for providing simultaneous voice, video, and data (16, 18, 20, 22) access services via Internet Protocol (IP) packets is described. The method includes recognizing a request form a subscriber to deliver at least two of voice, video and data services, mapping the voice, video, and data into subpackets, and mapping the subpackets into a single IP packet payload. After mapping, the IP packets are transported to a services provider where the voice, video, and data subpackets within the received IP Packets are identified and extracted from IP packet payload. The method further includes simultaneously switching voice subpackets into a telephone network and the video and data subpackets into a data network (32).

First claim
A method for delivering simultaneous voice, video, and data access services via Internet Protocol (IP) packets, said method comprising:
recognizing a request from a subscriber to deliver at least two of voice, video and data services;
mapping the voice, video, and data into subpackets;
mapping the subpackets into a single IP packet payload;
transporting the IP packets to a services provider;
identifying the voice, video, and data subpackets within the received IP packets;
extracting the subpackets from IP packet payload;
switching the voice subpackets into a telephone network and the video and data subpackets into a data network.

87. Method and system for providing dial-up data sessions with distributed service

US7301935B1 | Sprint Spectrum LLC

Bibliographic data
Publication date: 2007-11-27
Application date: 2002-02-28
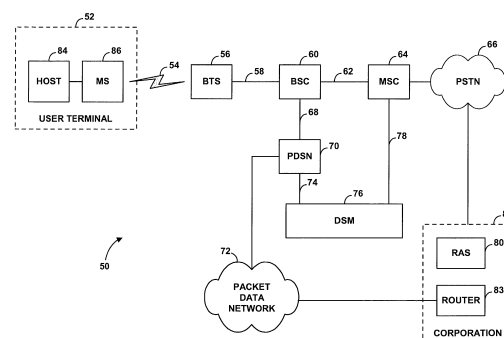Earliest priority date: 2001-06-27

Inventors: CHATURVEDI PAWAN, SENOGLES BRIAN L

CPC classification: H04L 12/4625, H04W 76/12, H04W 92/02
IPC classification: H04L 12/66, H04W 76/02, H04W 92/02, H04W 76/04

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A method and system for responding to a request to establish a dial-up data session from a user terminal to a remote destination. Instead of initiating a dial-up data session, the user terminal will initiate a packet-data session with a translation node that serves the remote destination and will provide the translation node with information about initiating the dial-up data session. The translation node will then initiate circuit-data session with the remote destination and will bridge the packet-data session with the circuit-data session, so as to establish an end-to-end data session between the user terminal and the remote destination. Advantageously, by setting up a packet-data session between the user terminal and the translation node, the underlying data may be carried over an access link at a higher service level than would normally be provided for a circuit-data session carried over that access link. Further, this can be done transparently to a user.

First claim

A method comprising:
receiving a request to establish a circuit-data session between a user terminal and a specified destination;
responsively (i) setting up a packet-data session between the user terminal and a translation node, (ii) setting up a circuit-data session between the translation node and the specified destination, and (iii) bridging the packet-data session with the circuit-data session,
wherein the translation node is one of multiple translation nodes disposed throughout a packet-switched network, the method further comprising selecting the translation node from the multiple translation nodes based on the specified destination.

88. Signaling for Internet end stations

Bibliographic data

Publication date: 2006-01-05
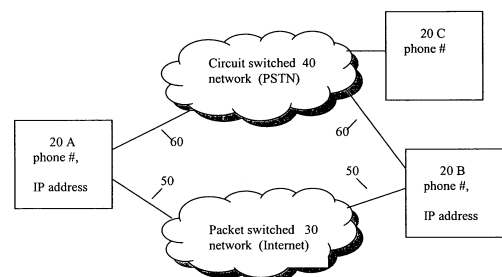Application date: 2005-09-09
Earliest priority date: 1997-12-09

Inventors: SOCACIU MICHAEL

CPC classification: H04L 67/14, H04L 69/329, H04M 7/00, H04M 7/0033, H04M 7/0057, H04M 7/0069, H04M 7/128, H04M 7/1295

IPC classification: H04L 12/66, H04L 29/08, H04L 29/06, H04M 7/00

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

Methods and apparatus, including computer program products, for signaling for Internet end stations. A signaling method includes a method of signaling including establishing a Packet Switched Telephone Network (PSTN) connection between a first end station having a first PSTN address and a first Internet address, and a second end station having a second PSTN address and a second Internet address, determining whether the end stations support Internet signaling, in response to determining, directly exchanging Internet addresses between the first Internet end station and the second Internet end station over the PSTN connection, disconnecting the PSTN connection, and establishing an end-to-end Internet connection between the first end station and the second end station.

First claim

A method of signaling comprising:

establishing a Packet Switched Telephone Network (PSTN) connection between a first end station having a first PSTN address and a first Internet address, and a second end station having a second PSTN address and a second Internet address;

determining whether the end stations support Internet signaling;

in response to determining, directly exchanging Internet addresses between the first Internet end station and the second Internet end station over the PSTN connection;

disconnecting the PSTN connection;

establishing an end-to-end Internet connection between the first end station and the second end station.

89. Integrated high bandwidth communications system

US20030185203A1 | AT&T Corp

Bibliographic data

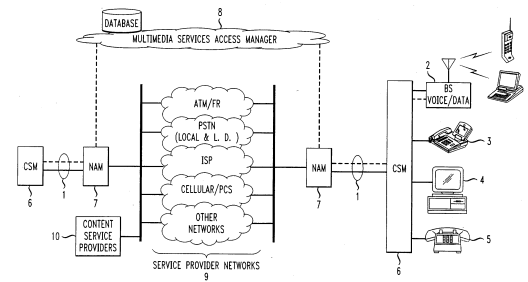Publication date: 2003-10-02
Application date: 2003-03-24
Earliest priority date: 1998-12-31

Inventors: CHOW ALBERT, RUSSELL JESSE EUGENE, WANG SPENCER, YING WENCHU

CPC classification: H04L 65/80, H04L 69/329
IPC classification: H04L 29/08, H04L 29/06

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A high bandwidth communications system for providing integrated voice, data, multimedia and other subscriber services and applications. Users of the system may select desired services on demand without intervention of the service provider. The services will then be provided over a high bandwidth pipe adequate to meet the needs of the requested services.

First claim

A method of integrating subscriber services in a high bandwidth communications system, said method comprising the steps of:

providing a high bandwidth connection to said subscriber's site;

providing an interface module between said high bandwidth connection and subscriber devices to which said subscriber services are to be provided, wherein said subscriber can select said services on demand.

90. Method and system for a routing server for selecting a PSTN gateway

US20030131132A1 | Innomedia Pte Ltd

Bibliographic data

Publication date: 2003-07-10
Application date: 2002-01-10
Earliest priority date: 2002-01-10

Inventors: CHENG SHIH-AN, VOZNESENSKY EUGENE, HONG JESSE

CPC classification: H04L 2012/6472, H04L 2012/6481, H04L 45/00, H04M 15/43, H04M 15/55, H04M 15/56, H04M 15/8044, H04M 2215/202, H04M 2215/2046, H04M 2215/42, H04M 2215/745, H04M 7/1285

IPC classification: H04M 15/00, H04M 7/00, H04L 12/64, H04L 12/701

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
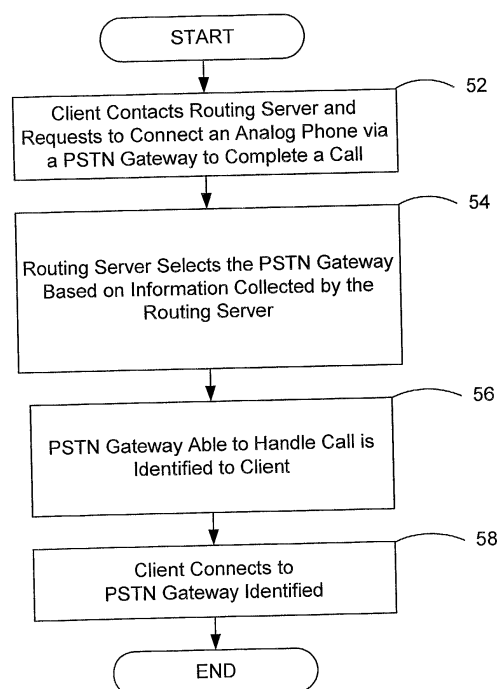
Abstract

A method and system for a Voice-over-Internet Protocol (VoIP) system is disclosed. The VoIP system includes a network configured to allow voice data to be transmitted and received over the network. Further, the network includes a routing server configured to automatically determine and identify a termination PSTN gateway from a plurality of termination PSTN gateways. Additionally, the VoIP system includes at least one VoIP client operatively coupled to the network to transmit and receive voice data over the network. Further, the at least one VoIP client connects to the termination PSTN gateway in order to transmit and receive voice data. Further, the VoIP system includes one or more of a gateway monitor, a routing cost policy server or a routing plan database. The gateway monitor is configured to provide to the routing server the status information on the plurality of termination PSTN gateway. The routing cost policy server is configured to provide to the routing server cost information. The routing server may extract information on the at least one VoIP client from the routing plan database.

First claim

A Voice-over-Internet Protocol (VoIP) system, comprising:
a network configured to allow voice data to be transmitted and received over the network wherein the network includes a routing server configured to automatically determine and identify a termination PSTN gateway from a plurality of termination PSTN gateways;
at least one VoIP client operatively coupled to the network to transmit and receive voice data over the network;
wherein the at least one VoIP client connects to the termination PSTN gateway in order to transmit and receive voice data; and
one or more of a gateway monitor configured to provide to the routing server the status information on the plurality of termination PSTN gateways, a routing cost policy server configured to provide to the routing server cost information or a routing plan database from which the routing server may extract information on the at least one VoIP client.

91. NETWORK SERVER PLATFORM FOR PROVIDING INTEGRATED BILLING FOR CATV, INTERNET, TELEPHONY AND ENHANCED BANDWIDTH SERVICES

US20020033416A1 | AT&T Corp

Bibliographic data

Publication date: 2002-03-21
Application date: 1998-12-31
Earliest priority date: 1997-12-31

Inventors: GERSZBERG IRWIN, MARTIN JEFFREY S, OPLINGER THOMAS, WALKER HOPETON S

CPC classification: H04M 19/001
IPC classification: H04M 19/00

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
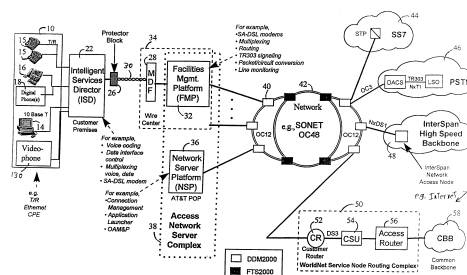
Abstract

A twisted pair and/or coaxial cable fed, integrated residence gateway controlled set-top device provides a plurality of services. One service is lifeline service which may be provided over the coaxial cable via a cable modem of the integrated residence gateway or over the twisted pair facility. An integrated residence gateway is coupled to either or both of the coaxial cable or twisted pair and distributes the bandwidth facilities available over either service vehicle to customer devices including a set top box. A network service platform is coupled to a cable facilities management platform for storing a subscriber profile, polling the integrated residence gateway for utility, cable television, telecommunications and other service usage and preference data provided in a billing period and generating an electronic bill for the subscriber over the twisted pair/coaxial cable facility for viewing on a visionphone. Premiums, awards and discounts may be provided via the network service platform upon verification of electronic payment of the electronic bill.

First claim

An integrated billing system comprising a caching server downloading multicast data to a plurality of multiplexing devices and at least one cable modem for multiplexing data and voice over one of a twisted pair wire and a coaxial cable drop respectively, the system comprising a memory including a subscriber profile for recording subscriber identity data, subscriber distribution facility data, subscriber equipment data, subscriber service data and subscriber preference data, the system further including a controller for generating an electronic bill for payment to a particular subscriber responsive to receipt from said devices of service usage data, changed subscriber identity data and preference data wherein said services comprise at least cable television services, data services and telecommunications services.

92. METHOD AND APPARATUS ENABLING STANDARD VOICE TELEPHONE TO INITIATE AND RECEIVE VOICE TELEPHONE CALLS ON TELEPHONE LINE OCCUPIED WITH DIAL-UP INTERNET CONNECTION

WO2002037777A1 | BB TECH PTY LTD, FAVELL GRAHAM DOUGLAS

Bibliographic data

Publication date: 2002-05-10
Application date: 2001-11-02
Earliest priority date: 2000-11-02

Inventors: FAVELL GRAHAM DOUGLAS

CPC classification: H04M 1/2473, H04M 1/2478, H04M 1/2535, H04M 11/06, H04M 7/0033, H04M 7/125, H04M 7/128, H04M 7/129, H04M 7/1295

IPC classification: H04M 7/00, H04M 1/253, H04M 11/06

External links: Google Patents, Espacenet, EP Register, Patentscope, PatBase Express, PatBase, Orbit
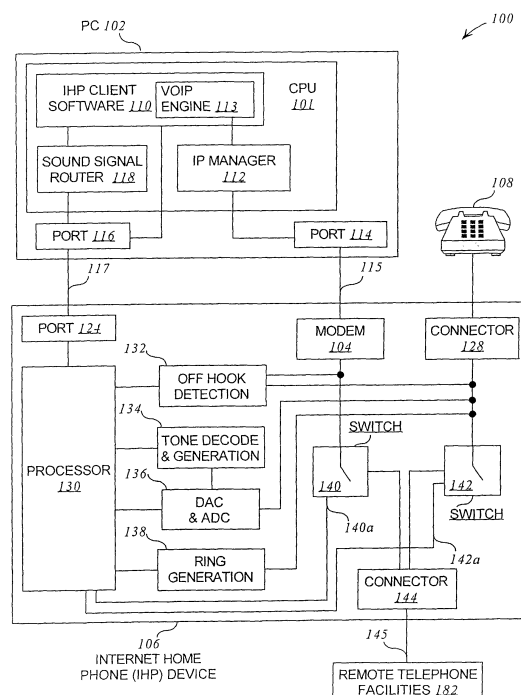
Abstract

Synergistic combination of existing personal computer (PC) software, new PC software, and a new Internet home phone (IHP) device enables customers to use a standard telephone to make and receive telephone calls even when their PC is connected to the Internet, Advantageously, the operation of the phone is unchanged, and the user can simultaneously use the PC to browse the worldwide web, upload and/or download files, and the like without affecting the quality of the voice telephone call.

First claim

A method of conducting voice and Internet communications simultaneously over one telephone connection, comprising operations of: interposing an Internet home phone (IHP) device between a telephone handset, a personal computer (PC), and a telephone line; while the computer is not connected to the Internet over the telephone line, the IHP device coupling the telephone handset to the telephone line; while the computer is connected to the Internet over the telephone line, performing operations comprising: the IHP device decoupling the telephone from the telephone line; the IHP device performing IHP conversion operations comprising: converting analog input signals from the telephone handset into nonIP digital input signals and transmitting the digital input signals to the PC; and receiving non-IP digital output signals from the PC and converting the received digital output signals into analog output signals and providing the analog output signals to the telephone handset; the PC performing PC-conversion operations comprising: converting the non-IP digital input signals from the IHP device into voice-over-Internet-protocol (VoIP) output packets and transmitting the VoIP output packets upon the Internet connection; and receiving VoIP input packets upon the Internet connection and converting the received VoIP input packets into the non-IP digital output signals and providing the non-IP digital output signals to the IHP device.

93. Bridge between multiple telephone service providers

US20030194077A1 | RAMEY BLAINE EDWARD

Bibliographic data

Publication date: 2003-10-16
Application date: 2002-04-15
Earliest priority date: 2002-04-15

Inventors: RAMEY BLAINE EDWARD

CPC classification: H04M 15/49, H04M 15/55, H04M 15/8044, H04M 2207/20, H04M 2215/2046, H04M 2215/42, H04M 2215/44, H04M 2215/46, H04M 2215/745, H04M 3/005, H04M 3/42289, H04Q 3/0045
IPC classification: H04M 3/42, H04M 3/00, H04Q 3/00

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
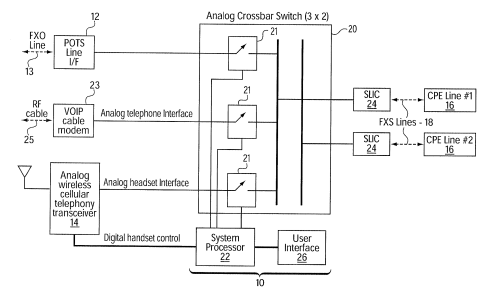
Abstract

A bridge device for telephony services includes a system processor, which is coupled between at least two heterogeneous telephone networks. The system processor includes information for selecting one of the heterogeneous networks in accordance with criteria. A switching device is controlled by the system processor to dynamically select one of the at least two heterogeneous telephone networks to provide service to a subscriber by causing a connection to be made to the selected telephone network.

First claim

A bridge device for telephony services, comprising:
a system processor coupled between at least two heterogeneous telephone networks, the system processor including information for selecting one of the heterogeneous networks in accordance with criteria; and
a switching device controlled by the system processor to dynamically select one of the at least two heterogeneous telephone networks to provide service to a subscriber by causing a connection to be made to the selected telephone network.

94. TCP/IP PACKET-CENTRIC WIRELESS TRANSMISSION SYSTEM ARCHITECTURE

EP1197040B1 | Malibu Networks Inc

Bibliographic data

Publication date: 2007-01-24
Application date: 2000-07-07
Earliest priority date: 1999-07-09

Inventors: JORGENSEN JACOB W

CPC classification: H04L 1/20, H04L 12/1813, H04L 12/1836, H04L 12/189, H04L 47/193, H04L 47/2491, H04L 47/27, H04L 63/0272, H04L 69/161, H04L 69/163, H04L 69/165, H04L 69/169, H04Q 11/0414, H04Q 2213/1305, H04Q 2213/13096, H04Q 2213/13097, H04Q 2213/13098, H04Q 2213/13141, H04Q 2213/13166, H04Q 2213/13176, H04Q 2213/13196, H04Q 2213/13204, H04Q 2213/13216, H04Q 2213/1322, H04Q 2213/13292, H04Q 2213/13296, H04Q 2213/13348, H04Q 2213/13389, H04W 28/02, H04W 28/20, H04W 28/26, H04W 72/04, H04W 80/06

IPC classification: H04W 72/04, H04L 12/28, H04M 3/00, H04L 1/20, H04Q 11/04, H04L 12/18, H04W 28/04, H04W 80/06, H04W 28/20, H04W 28/26, H04L 47/27, H04L 47/80

External links: Google Patents, Espacenet, EP Register, PatBase Express, PatBase, Orbit

Abstract

A packet-centric wireless point to multi-point telecommunications system includes: a wireless base station communicating via a packet-centric protocol to a first data network; one or more host workstations communicating via the packet-centric protocol to the first data network; one or more subscriber customer premise equipment (CPE) stations coupled with the wireless base station over a shared bandwidth via the packet-centric protocol over a wireless medium; and one or more subscriber workstations coupled via the packet-centric protocol to each of the subscriber CPE stations over a second network. The packet-centric protocol can be transmission control protocol/internet protocol (TCP/IP). The packet-centric protocol can be a user datagram protocol/internet protocol (UDP/IP). The system can include a resource allocation means for allocating shared bandwidth among the subscriber CPE stations. The resource allocation is performed to optimize end-user quality of service (QoS).

First claim

A packet-centric wireless point to multi-point telecommunications system (300) comprising
a wireless base station (302) communicating via a packet-centric protocol to a first data network (142);
one or more host workstations (136a) communicating via said packet-centric protocol to said first data network (142);
one or more subscriber customer premise equipment (CPE) stations (294d) coupled with said wireless base station (302) over a shared bandwidth via said packet-centric protocol over a wireless medium, wherein real-time bandwidth allocations and system resource allocations are determined based on contents of packets to be communicated over said wireless medium; and
one or more subscriber workstations (120d) coupled via said packet-centric protocol to each of said subscriber CPE stations (294d) over a second network.

95. Lifeline service for HFCLA network using wireless ISD

US6714534B1 | AT&T Corp

Bibliographic data

Publication date: 2004-03-30
Application date: 1998-12-31
Earliest priority date: 1997-12-31

Inventors: GERSZBERG IRWIN, MARTIN JEFFREY S,
                  OPLINGER THOMAS, WALKER HOPETON S

CPC classification: H04L 2012/5605, H04L 2012/5606, H04L 2012/561, H04L
                      2012/5615, H04L 2012/563, H04L 2012/5632, H04L
                      2012/5639, H04L 2012/5667, H04Q 11/0421, H04Q
                      2213/13012, H04Q 2213/13031, H04Q 2213/13034, H04Q
                      2213/13093, H04Q 2213/13096, H04Q 2213/13103, H04Q
                      2213/13141, H04Q 2213/13175, H04Q 2213/13176, H04Q
                      2213/13196, H04Q 2213/13199, H04Q 2213/13204, H04Q
                      2213/13209, H04Q 2213/13248, H04Q 2213/1326, H04Q
                      2213/1329, H04Q 2213/13292, H04Q 2213/13298, H04Q
                      2213/13299, H04Q 2213/13331, H04Q 2213/13337, H04Q
                      2213/13349, H04Q 2213/13367, H04Q 2213/13389, H04Q
                      2213/13405, H04Q 3/0016
IPC classification: H04Q 3/00, H04Q 11/04, H04L 12/70

External links: Google Patents, Espacenet, PatBase Express,
                      PatBase, Orbit
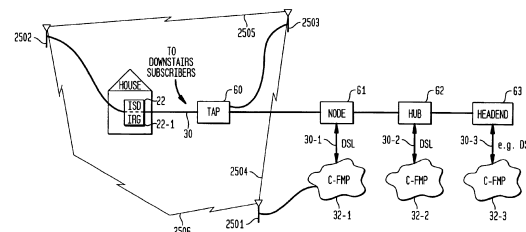
Abstract

A system architecture for bypassing a local exchange carrier comprises an intelligent terminal, a residential gateway coupled to the terminal, a cable facility management platform terminating a twisted pair or coaxial cable facility and a network service platform. The twisted pair and/or coaxial cable fed, integrated residence gateway controlled intelligent terminal or set-top device provides a plurality of enhanced services. One necessary service is lifeline service that may be provided over the coaxial cable via a cable modem of the integrated residence gateway, over the twisted pair facility or via wireless means. The integrated residence gateway is coupled to either or both of the coaxial cable or twisted pair and distributes the bandwidth facilities available over either service vehicle to customer devices including the set top box. Wireless lifeline services may be offered through transceivers placed at the integrated residence gateways and/or at taps feeding the integrated residence gateways.

First claim

A method of providing a lifeline connection between a gateway and a node connected to a network, comprising the steps of:
detecting a failure of a wired connection between said gateway and said network;
establishing a wireless connection between said gateway and said node connected to said network, said wireless connection including a first transceiver and a second transceiver, wherein said establishing step comprises the steps of:
establishing a first wireless connection between said first transceiver at said gateway and a third transceiver at a tap;
establishing a second wireless connection between said third transceiver at said tap and said second transceiver at said node.

96. System and method for sharing computer screens over a telephony network

US6741586B1 | 3Com Corp

Bibliographic data

Publication date: 2004-05-25
Application date: 2000-05-31
Earliest priority date: 2000-05-31

Inventors: SCHUSTER GUIDO M, SIDHU IKHLAQ S, MAHLER JERRY J, DEAN FREDERICK D, GRABIEC JACEK A

CPC classification: G06F 3/1454, H04L 67/08, H04L 69/329, Y10S 379/90
IPC classification: G06F 3/14, H04L 29/08, H04L 29/06

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A system and method for communicating screen display images on a computer to another computer using a telephony network. A screen share button on a data network telephone initiates a screen shot request to a first computer associated with the data network telephone. The first computer uses a screen shot application to retrieve the image on the computer display and send it to the data network telephone. The data network telephone receives the screen shot image and sends the image to another data network telephone which is a party to a telephone conversation with the first data network telephone. The first data network telephone preferably uses the SIP invite with a session description protocol that permits the transfer of image data on SIP messages. The second data network telephone implements the image data session description protocol and communicates the screen shot image to the second computer.

First claim

A system for communicating shared computer screens on a data network telephony system comprising:
a data network to provide data connectivity for a plurality of data communications channels using data transport protocols;
first and second data network telephones connected to the data network, each data network telephone operable to communicate a voice signal as voice-over-data packets on a voice-over-data channel, the voice over data channel being one of the plurality of data communications channels on the data network, the data network telephones operable to convert voice-over-data packets communicated on the voice-over-data channel to voice signals;
a screen share button and a screen share application in the first data network telephone, the screen share button operable to indicate a button press to the screen share application, the screen share application operable to send a screen share request on the data network, to receive a screen shot image from the data network and to send the screen shot image to the second data network telephone;
a first computer connected to the first data network telephone, the first computer comprising a computer screen share application operable to receive the screen share request, to retrieve a screen shot image, and to communicate the screen shot image on the data network; and
a second computer connected to the second data network telephone, the second computer operable to receive the screen shot image from the second data network telephone.

97. Methods and systems for providing wide-band voice service via a telephone switch system
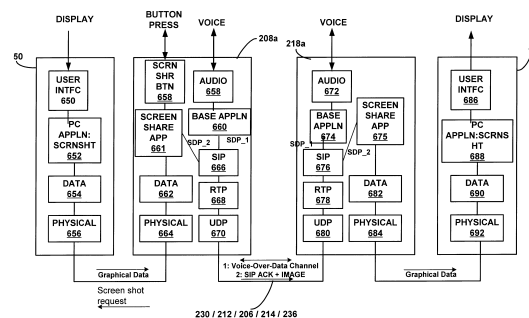
US7236484B2 | Lucent Technologies Inc

Bibliographic data

Publication date: 2007-06-26
Application date: 2002-07-22
Earliest priority date: 2002-07-22

Inventors: KOTT JOSEPH JOHN, POSTHUMA CARL ROBERT

CPC classification: H04L 12/66
IPC classification: H04J 3/16, H04L 12/66

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

Methods and systems for providing wide-band voice service via a telecommunications switch are described herein. A call can be initiated from a wide-band telecommunications device (e.g., an IP telephone) to another telecommunications device through a gateway (e.g., an IP gateway) associated with one or more telecommunications networks, such as, for example, a WAN, LAN and/or PSTN. One or more digital signals (e.g., 4 or fewer DS0s) can then be reserved for the call, if a telecommunications switch (e.g., a class 5 circuit switch, 5ESS®, etc.) associated with one or more of the telecommunications networks determines that at least one timeslot is available to permit a transfer of the call to the other telecommunications device. Thereafter, a wide-band signal converted from the digital signal carrying the call from the gateway to the other telecommunications device can be passed over a telecommunications interface, such as a GR-303 connection, as determined by the telecommunications switch to the other telecommunications device.

First claim

A method for providing wide-band voice service via a telecommunication switch, the method comprising the steps of:
initiating a call from a wide-band telecommunications device to another telecommunication device through a gateway associated with at least one telecommunication network;
reserving up to four digital signals for the call, in response to a request from a gateway to a telecommunications switch associated with the at least one telecommunication network;
analyzing an identification number associated with the another telecommunications device utilizing the telecommunications switch to determine if the another telecommunications device comprises a wide-band telecommunications device or a narrow-band telecommunications device, thereby permitting a completion of the call from the wide-band telecommunications device to the another telecommunications device utilizing the up to four digital signals and the telecommunications switch over the at least one telecommunications network;
sending a busy signal to the wide-band telecommunications device if at least one timeslot is not available to permit a transfer of the call to the another telecommunications device when reserving the up to four digital signals for the call.
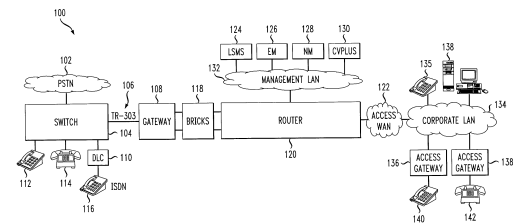
98. System, apparatus and method for voice over internet protocol telephone calling using enhanced signaling packets and localized time slot interchanging

US20020141386A1 | NACT ACQUISITION Inc, NACT TELECOMMUNICATIONS Inc

Bibliographic data
Publication date: 2002-10-03
Application date: 2001-03-29
Earliest priority date: 2001-03-29

Inventors: MINERT BRIAN D, BROWN GARY D

CPC classification: H04L 65/103, H04L 65/104, H04L 65/1069, H04M 7/066, H04M 7/1245, H04M 7/1285, H04Q 2213/13034, H04Q 2213/13176, H04Q 2213/13196, H04Q 2213/13389, H04Q 2213/13393, H04Q 3/0025

IPC classification: H04L 29/06, H04M 7/00, H04Q 3/00

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit
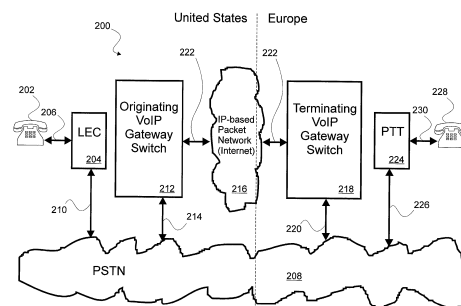
Abstract
The present invention is a system, apparatus and method for voice over Internet protocol telephone (VoIP) calling using enhanced SS7 signaling packets and may include localized time slot interchanging. A system embodiment of the invention includes originating and terminating VoIP gateway switches in communication with the public switched telephone network (PSTN) and also in communication with an IP-based packet network, such as the Internet, for transmitting packets. The VoIP gateway switches are configured to exchange enhanced SS7 signaling packets over the IP-based packet network for setting up and tearing down VoIP telephone calls. A method of placing a VoIP telephone call in accordance with the present invention includes initiating a telephone call to a destination and connecting the telephone call to an originating VoIP gateway switch using enhanced SS7 signaling packets. The method also includes determining a preferred route from the originating VoIP gateway switch to the destination through an IP-based packet network and through a terminating VoIP gateway switch nearest said destination, and setting up two-way communication through the preferred route using the IP-based packet network using enhanced SS7 signaling packets.

First claim
A method for Voice over Internet Protocol (VoIP) telephone calling over an IP-based packet network comprising:
initiating a telephone call to a destination associated with a destination telephone number;
connecting said telephone call to an originating VoIP gateway switch over a public switched telephone network (PSTN);
determining a preferred route from said originating VoIP gateway switch to said destination through said IP-based packet network and through a terminating VoIP gateway switch nearest said destination using enhanced SS7 signaling packets;
setting up two-way communication through said preferred route using enhanced SS7 signaling packets over said IP-based packet network.

99. Cable connected network server platform for telephone white-yellow page services and emergency 911 location identification

US6570974B1 | AT&T Corp

Bibliographic data

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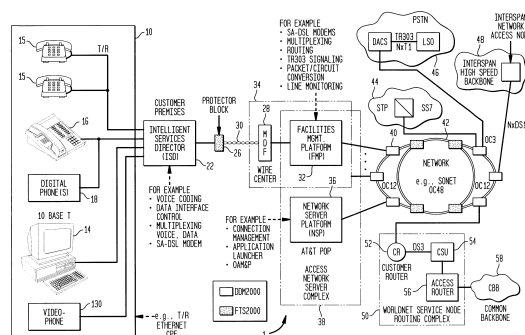
IPC classification: H04N 7/14, H04M 11/04, H04M 3/42, H04N 7/173, H04M 3/493

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A twisted pair and/or coaxial cable fed set-top device provides a plurality of services, including computerized directory assistance services and identification of the geographic location and set top device from which a directory assistance query has been made. Directory assistance information may be broadcast from a cable head end, or a directory assistance database may be searched, based on a query entered by a user, or both broadcasting and searching may be performed. The search results can be prioritized based on the geographical proximity between locations of the listings in the search results and the location from which the query was entered. The address of the set top device and/or the tap to which the set top device is coupled are used for determining the location from which the query was entered.

First claim

A method of providing automated telephone directory assistance, comprising steps of:
providing a user interface allowing entry of a directory assistance query;
appending an address that is uniquely associated with an addressable cable set top device to a received directory assistance query;
transmitting the directory assistance query and the address associated with the cable set top device to a computerized directory assistance server over at least a portion of a local loop network;
searching a directory assistance database based on at least the received directory assistance query and the address associated with the cable set top device;
prioritizing results produced by searching based on a geographical proximity of each search result to a geographical location from which directory assistance query was entered;
appending the address associated with the cable set top device to the results;
transmitting the results and the address associated with the cable set top device over at least a portion of the local loop network to the cable set top device;
communicating the results through the user interface.

100. Network telephony

Bibliographic data

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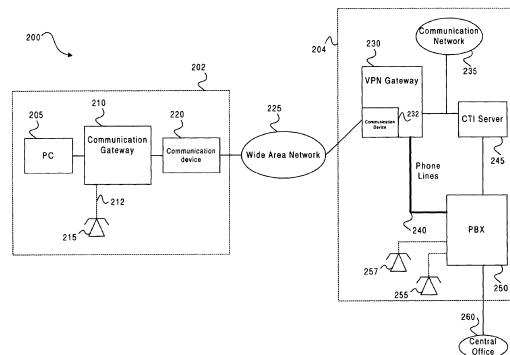Application date: 2000-07-21
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Inventors: HENDERSON P MICHAEL

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IPC classification: H04M 3/42, H04M 7/00, H04M 3/537

External links: Google Patents, Espacenet, PatBase Express, PatBase, Orbit

Abstract

A telephony system and method for providing telephony services to remote users. The telephony system comprises a user side and a provider side. The user side includes a telephony instrument and a personal computer for establishing communication with the provider side via a communication gateway, a communication device and a wide area network, such as the Internet. The provider side includes a virtual private network in communication with the wide area network and a communication network. The communication network is in communication with a telephony server interfacing with a telephone switched system. The telephone switched network provides telephone lines for allocation of the telephone lines by the virtual private network to the remote users.

First claim

A communication system comprising:
a first network;
a second network;
a first communication device providing communication between said first and second networks;
a telephone switching system in communication with said first network and providing at least one communication line for allocation by said first network;
wherein said first network allocates one or more of said at least one communication line for use by a communication instrument via said first communication device and said second network.