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(54) ENHANCED E911 NETWORK ACCESS FOR CALL CENTERS

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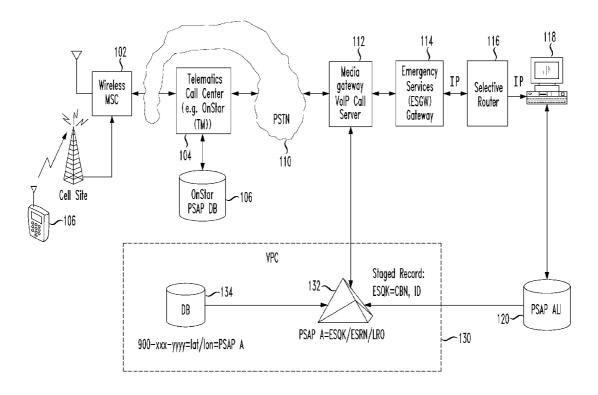
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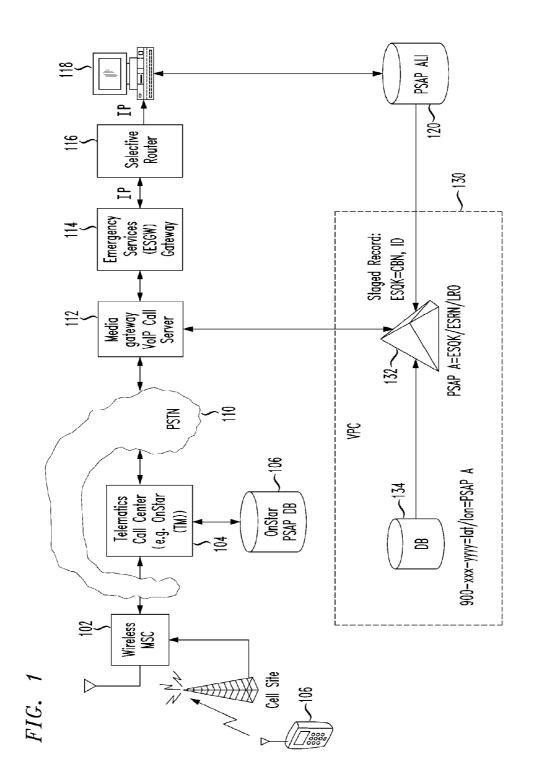
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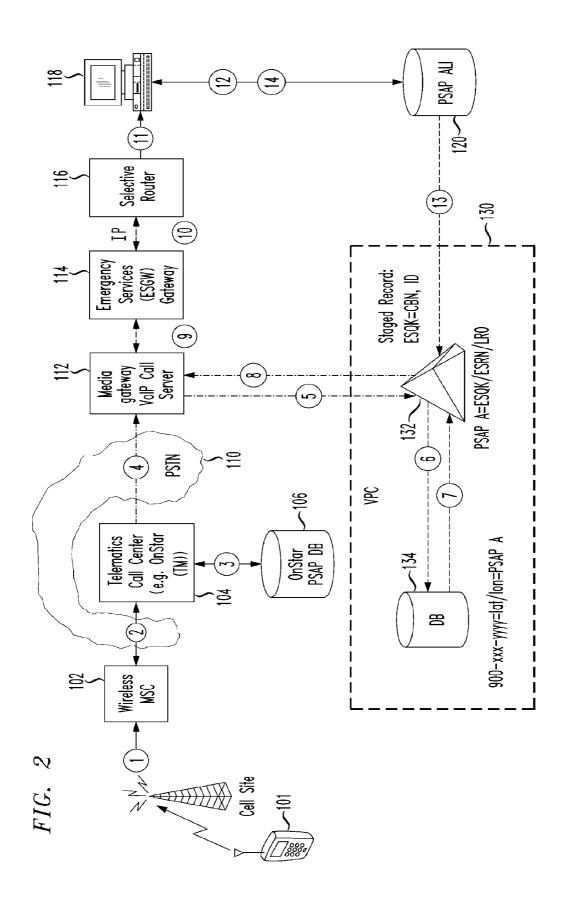
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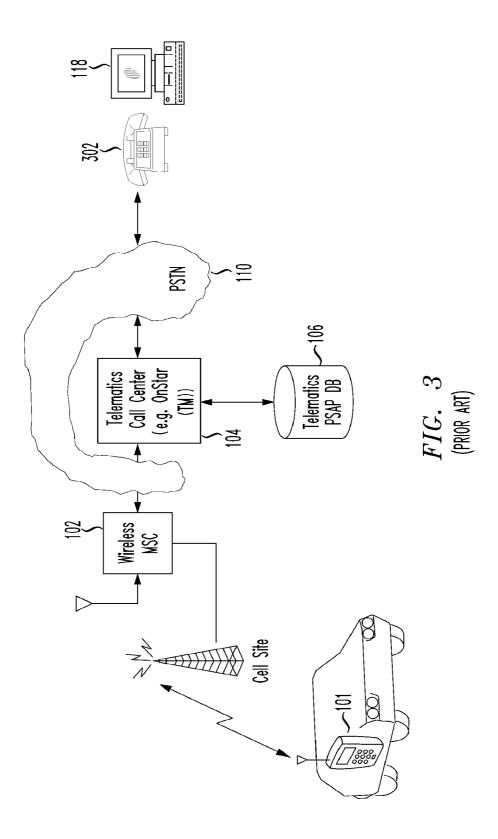
(57) **ABSTRACT**

An emergency call (e.g., a 911 call, an alarm company call) forwarded by a telematics call center is routed over the switched PSTN to a Voice Over Internet Protocol (VoIP) call server, where the switched call is converted to a session initiating protocol (SIP) packetized IP call for presentation to an emergency services gateway, which reconverts the call to TDM and connects to a selective router via dedicated circuits, gaining full access to the Enhanced 911 network. This provides a PSAP receiving a call from a telematics call center or other call center with all features available in an Enhanced 911 network, e.g., callback number of the 911 caller, and location of the 911 caller. Location of the caller is provided using a VoIP positioning center (VPC).









ENHANCED E911 NETWORK ACCESS FOR CALL CENTERS

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention This invention relates generally to E9-1-1 emergency phone calls.

[0002] More particularly, it relates to emergency E9-1-1 calls using Voice Over Internet Protocol (VoIP), originating from centralized call centers.

[0003] 2. Background of the Related Art 911 is a phone number widely recognized as an emergency phone number that is used by emergency dispatch personnel, among other things, to determine a location of a caller. Enhanced 911 (E911) is defined by the transmission of callback number and location information to the relevant public safety answering point (PSAP). A PSAP is the endpoint of an emergency services call. PSAPs are responsible for answering emergency services calls. E911 may be implemented for landline and/or mobile devices. Some Public Safety Access Points (PSAPs) are not enhanced, and thus do not receive the callback or location information from any phone, landline or mobile.

[0004] Many cars built today include a telematics system. The word "telematics", in its broadest sense, relates to the combination of computers and wireless telecommunications technologies. More recently, the term "telematics" has evolved to refer to automobile systems that combine global positioning satellite (GPS) tracking and other wirless communications for automatic roadside assistance and remote diagnostics. General Motors Corp. first popularized automotive telematics with its OnStarTM system. Mercedes-Benz offers a similar system called TeleAidTM. The use of the word "telematics" throughout the current specification is intended to refer to the later definition of more recent recognition, i.e., to mean automotive telematics.

[0005] Many new vehicles are equipped with wirelessbased telematics units providing services controlled by voice commands. One successful telematics system is available from OnStar Corp. (www.onstar.com). According to OnStar, OnStar brings together emergency service providers, wireless telephone, and satellite technologies to help protect a driver, and keep them connected on the road.

[0006] As part of the telematics system, a telematics unit including a cellular circuit is located within the vehicle, and powered by the vehicle's battery. Telematics units were originally analog-only, but have migrated to analog/digital-ready, and finally to dual-mode analog/digital. Dual-mode analog/digital telematics units operate on both the analog and digital wireless networks.

[0007] With a suitable subscription to use of a telematics operations center such as OnStar, a driver or passenger in a vehicle including a telematics unit has access to a voice-activated calling feature in their vehicle, just in case their hand-held cell phone is lost, forgotten or has a low battery. They can pre-purchase OnStar Hands-Free Calling minutes to use on the road. Such packages are typically billed to a credit card they keep on file with OnStar. They can order minutes packages by pushing the phone or white-dot button at any time.

[0008] Conventional telematics units are also capable of providing location information to a requesting wireless network, using a Global Positioning Satellite (GPS) mounted in the vehicle, or using other location technology within the wireless network. When a vehicle occupant pushes a given button in the vehicle, essentially calling the telematics opera-

tions center, the telematics operations center identifies the vehicle's location. Moreover, if their air bag deploys, the location of the vehicle can be reported to the telematics operations center. So it's only when the button is pushed to contact the telematics operations center, or when the telematics operations center is responding to an emergency signal, that the telematics operations center is provided with a location of the vehicle.

[0009] Today, most telematics companies and more generally alarm companies monitor signals from customers' car, home or business. The monitoring is usually centralized in a single location for customer locations across the country (e.g., a station in Columbus, Ohio might monitor homes throughout the country for a given monitoring company. In more global companies, an alarm or other monitoring company might monitor alarm signals from homes in the United States from a centralized command center located in Bombay, India.

[0010] Thus, in today's global economy, when a customer places an emergency call such as a 911 call (or automated alarm system emergency call), the call may be routed very far away, and in some instances half-way across the world. The telematics operator must then transfer the 911 call to the relevant 911 center (public safety access point (PSAP)). However, this transfer must take place over the Public Switched Telephone Network (PSTN) because such transfer, cannot conventionally be gained to the PSAP's existing Enhanced 911 (E911) dedicated network where location and callback number of the originating 911 caller are provided. Moreover, note that even the call related information (e.g., CallerID) provided with the call would relate to the identity and location of the centralized telematics center-not to the callback number and certainly not the location of the customer originally dialing 911.

[0011] FIG. **3** shows conventional relevant systems in an emergency 911 call made via a telematics call center.

[0012] In particular, as shown in FIG. 3, a telematics unit 101 within a car dials 911. The 911 call is serviced by a cell site of a service provider, which includes a given mobile servicing center (MSC) 102. The MSC 102 passes the 911 call on to its relevant telematics call center 104. The telematics call center 104 may be, e.g., an ONSTARTM call center.

[0013] The operator at the telematics call center **104** that handles the 911 call of its own subscriber obtains the identity and location information of the 911 caller. Based on the current location of the 911 caller, the operator performs a query of a telematics PSAP database **106** to determine a unique 10-digit phone number of the proper local PSAP physically responsible for the location of the 911 caller.

[0014] The operator at the telematics call center **104** then forwards the 911 caller to the PSAP by dialing its 10-digit phone number via the public switched telephone network (PSTN) **110**.

[0015] Unfortunately, calls that arrive at the PSAP in this manner do not include call-back number (Automatic Number Identification (ANI)) and location information (Automatic Location Identification (ALI)). Moreover, the PSTN telephone **302** at the PSAP **118** is typically not answered with the same priority as are calls that originate on its E911 network. In addition, these calls are typically not recorded or time-stamped by PSAP equipment as are calls that arrive via the E911 network.

[0016] Trials have been conducted in which a local exchange carrier (LEC) has permitted access to a selective

router for the E911 network via the PSTN. In this trial, the LEC designated a specific 10-digit telephone number. A caller has their emergency call transferred to this 10-digit telephone number, which is then call-forwarded within the central office to the selective router, which then forwards the call to the correct PSAP based upon the digits dialed. However, this solution suffers the same significant drawbacks as that shown in FIG. **3**, i.e., that callback number and location are not provided to the responsible PSAP.

[0017] Other conventional technology relies on the PSAP having separate, second set of phone equipment capable of receiving proprietary data from the telematics center 104. But this solution would be prohibitively costly to implement nationwide for each telematics center, not to mention take up valuable space inside a PSAP center. Thus, the costs and disruption caused by the need for new hardware has little congestion control, making this a rather undesirable solution. [0018] There is the need for a simple and effective solution to providing easy and full access to the Enhanced 911 network of an emergency services provider (e.g., PSAP) from users of a centralized call center, e.g, telematics call center, alarm call center, etc.

SUMMARY OF THE INVENTION

[0019] An emergency call (e.g., a 911 call, an alarm company call) forwarded by a telematics or other call center is routed over the switched PSTN to a Voice Over Internet Protocol (VoIP) call server, where the switched call is converted to a session initiating protocol (SIP) packetized IP call for presentation to an emergency services gateway (ESGW), which converts the call back to TDM and routes the call to a local selective router, thus gaining full access to the Enhanced 911 network. This provides a PSAP receiving a call from a telematics call center or other call center with all features available in an Enhanced 911 network, e.g., callback number of the 911 call center, and location of the 911 call center,. Identification of the call center and the call-back number of the call center is provided using existing ALI circuits between a VoIP positioning center (VPC) and the PSAP's ALI database. The call center operator may update the VPC database with the caller's actual location and phone number, which can in turn be transmitted to the PSAP via existing ALI links.

[0020] In accordance with the principles of the present invention, a method of providing a call center with access to an Enhanced 911 network supporting a public safety answering point (PSAP) comprises determining a unique PSAP having jurisdictional responsibility for a physical current location of a caller to the call center. The caller is forwarded via a switched telephone network to a VoIP call server. The switched telephone call is converted into a session initiating protocol (SIP) packetized phone call. A VoIP positioning center is queried from the VoIP call server for call routing instructions for the SIP packetized phone call. The SIP packetized phone call is forwarded based on the call routing instructions to an emergency services gateway (ESGW) for conversion back to TDM and subsequent routing to the correct selective router.

BRIEF DESCRIPTION OF THE DRAWINGS

[0021] FIG. **1** shows an exemplary E911 architecture including E911 network access provided to a telematics call center or other call center, in accordance with the principles of the present invention.

[0022] FIG. **2** shows an exemplary call flow tracing an emergency 911 call from a telematics subscriber source to the appropriate PSAP, in accordance with the principles of the present invention.

[0023] FIG. **3** shows conventional relevant systems in an emergency 911 call made via a telematics call center.

DETAILED DESCRIPTION OF ILLUSTRATIVE EMBODIMENTS

[0024] In accordance with the principles of the present invention, an emergency call (e.g., 911 call, alarm company call) forwarded by a telematics call center is routed over the switched PSTN to a Voice Over Internet Protocol (VoIP) call server, where the switched call is converted to a packetized IP call for presentation to an emergency services gateway, gaining access to the Enhanced 911 network. Location of the caller is provided using a VoIP positioning center (VPC).

[0025] Voice Over IP (VoIP) is a technology that has been developed as an alternative telephony technology to the conventional telephony service (e.g. PSTN). VoIP takes advantage of high speed Internet data networks, and is able to provide low cost telephony services to end users. VoIP technology emulates a phone call, but instead of using a circuit based system such as the telephone network, utilizes packetized data transmission techniques most notably implemented in the Internet.

[0026] Voice-Over-Internet Protocol (VoIP) emulates a phone call, but instead of using a circuit based system such as the telephone network, utilizes packetized data transmission techniques most notably implemented in the Internet.

[0027] VoIP phone calls are routed to a VoIP voice gateway, from which they are passed on to their destination VoIP device. Conventional VoIP voice gateways (i.e., soft switches) are typically located in only a few places across the country. A soft switch is a programmable network switch that can process the signaling for all types of packet protocols. Also known as a 'media gateway controller,' call agent,' or 'call server,' such devices are used by carriers that support converged communications services by integrating SS7 telephone signaling with packet networks. Softswitches can support, e.g., IP, DSL, ATM and frame relay.

[0028] Because VoIP is Internet Protocol (IP) based, call related information such as CallerID type services may not be available or accurate. A location of a given VoIP device may be provisioned to be at a given geographic location, or queried from a home location register (HLR) in a mobile system.

[0029] FIG. **1** shows an exemplary E911 architecture including E911 network access provided to a telematics call center or other call center, in accordance with the principles of the present invention.

[0030] The present invention applies VoIP technology in lieu of the switched telephone connectivity of the PSTN to route calls to a media gateway/VoIP call server **112**. The switched call is converted into a packetized call using Internet Protocol (IP), and is routed via the internet to the ESGW **114** closest to the appropriate selective router for the destination PSAP. The ESGW converts the packetized IP data back into traditional TDM, and routes the call to the intended selective router **116** via dedicated TDM trunks, where it enters the E911 network. A selective router is the node in an emergency services network that performs enhanced call routing for 911 calls.

[0031] An example will be used to further illustrate the inventive architecture. In this example, a telematics unit 101

within a car dials 911. The 911 call is serviced by a cell site of a service provider, which includes a given mobile servicing center (MSC) **102**. The MSC **102** forwards the 911 call on to its relevant telematics call center **104** via the PSTN. The telematics call center **104** may be, e.g., an ONSTARTM call center, and may be located anywhere in the country or anywhere in the world.

[0032] The operator at the telematics call center **104** that handles the 911 call of its own subscriber obtains the nature of the call, as well as the identity and location of the 911 caller. The identity and location of the 911 call from the subscriber is most often received by the call center **104** over the open phone line to their subscriber. Equipment to receive the exact location of the subscriber is expensive, but necessary only at the centralized telematics call center. The thousands of PSAPs in the country do not have the same equipment, as it would be prohibitively expensive.

[0033] Based on the current location of the 911 caller, the operator performs a query of a telematics PSAP database **106** to determine a local PSAP physically responsible for that location, as well as a unique 10-digit phone number to access the Enhanced 911 network of that PSAP.

[0034] The operator at the telematics call center **104** handling the 911 call forwards the emergency call to a given media gatewayNoIP call server **112** by dialing the designated 10-digit number for that PSAP

[0035] To determine the appropriate PSAP and ESGW, the VoIP call server 112 queries a VoIP positioning center (VPC) 130. The VPC includes SIP connectivity to the VoIP call server 112. The VoIP call server 112 may also process VoIP calls. Using the 10-digit phone number dialed by the call center operator 104, the VPC queries the database 134 to determine the corresponding PSAP. The VPC then assigns an Emergency Services Query Key (ESQK) to the call and relays this routing key back to the VoIP Call Server 112.

[0036] The VoIP call server 112 passes the 911 emergency call on to an emergency service gateway ESGW 114, which in turn passes the 911 emergency call on to the desired PSAP 118. An ESGW resides in a VoIP service provider's network, and is responsible for integrating the session initiating protocol (SIP) network with the emergency services network (TDM). An ESGW 114 network includes dedicated voice trunks to selective routers in the Enhanced 911 (E911) network for any/all PSAPs being served (ideally a national network). The ESGW 114 routes 911 calls to the appropriate selective router, based on the ESRN/ESQK it receives.

[0037] The selective router **116** is provisioned with emergency services query keys (ESQKs) with ALI steering. (The ESQK is a digit string that uniquely identifies an ongoing emergency services call and is used to correlate the emergency services call with the associated data messages. It may also identify an emergency services zone and may be used to route the call through the network. The ESQK is similar to an ESRK in wireless E911 networks.)

[0038] A subscriber location database (SLDB) **134** is also provisioned. Preferably the SLDB **134** is configured so that no modifications are required to the core conventional existing VoIP E9-1-1 network. The SLDB **134** is used to relate a Session Initiated Protocol (SIP) Universal Resource Identifier (URI) or a telephone number to a PSAP.

[0039] In the given embodiments the SLDB **134** includes a listing of a series of "subscribers", in which each subscriber is really a specific PSAP with a designated 1-900-xxx-yyyy phone number. Note that the phone number does not need to

be a 1-900 number as this is used as an example only. This is also a useful technique for billing the call center for this service.

[0040] In the disclosed embodiments, the address of this "subscriber" is the latitude/longitude (lat/lon) of a centroid of the jurisdiction of the relevant PSAP. Alternatively, in datbases that use tables in lieu of GIS for routing determination, the address of the "subscriber" can be any valid address within the jurisdiction of the PSAP.

[0041] FIG. **2** shows an exemplary call flow tracing an emergency 911 call from a telematics subscriber source to the appropriate PSAP, in accordance with the principles of the present invention.

[0042] In particular, as shown in FIG. 2, a caller or automated calling device 101 contacts a local security monitoring company or roadside assistance operator or similar third party call center 104. As an example shown in step 1, a caller 101 dials 911, which is serviced through a wireless MSC 102 and passed on to the relevant telematics call center, e.g., an OnSTARTM call center. In the given example, the wireless MSC 102 may be part of a wireless carrier's network, with the 911 call being forwarded to the relevant telematics call center 104. Alternatively, the MSC 102 may be part of a large wireless network used by the telematics company itself.

[0043] The 911 call may be placed using an SOS or similar single-press button located in a car for use in emergency situations, automatically in the event of an accident, etc. Alternatively, the phone user may simply dial 911 in a manual cell phone call from a mobile phone, either integrated into a vehicle or entirely separate from a vehicle.

[0044] In step 2, a wireless MSC **102** routes the incoming emergency call to a telematics call center **104** (e.g., an ONSTARTM or TeleAidTM call center). In the given example this routing includes use of the PSTN **110**, though this need not be the case in all applications.

[0045] The call taker at the call center **104** who receives the 911 call from the caller **101** determines that this is an emergency call that must be referred to the local 911 PSAP.

[0046] Thus, in step **3**, the telematics call taker queries an existing telematics PSAP database **106** to determine the correct PSAP to which the call should be routed. Of course, to save time step **3** may be performed simultaneous with, or even prior to, the call taker's determination that the call from the mobile user **101** is an emergency call.

[0047] In step 4, a telematics dispatcher dials (could be the same person and/or equipment as the call taker) a NPA-xxxyyyy number designated for the determined PSAP. For instance, the call taker at the call center **104** then dials 1-900xxx-yyyy, a designated number for that PSAP **118**, and prepares to conduct a conference call with the caller **101** and the PSAP **118**.

[0048] The call is then routed, via the PSTN **110**, to a designated VoIP call server **112**. The VoIP call server **112** may be co-located with a media gateway, which serves to convert TDM to IP. The VoIP call server **112** routes the resulting IP calls much like a traditional telephone switch routes a TDM call.

[0049] The VoIP call server **112** receives the ANI (caller ID) of the call center. The VoIP media gateway **112** reformats the call from time division multiplex (TDM) or code division multiplexed (CDM) into session initiation protocol (SIP). The VoIP Call Server rearranges the dialed digits, putting the DID that was dialed in step iii (e.g., 1-900-xxx-yyyy) in the FROM field and putting the ANI of the call center into the

Just-in-Time callback number (JIT CBN) field within the P-Asserted Identity in the SIP Invite. (Session initiated protocol (SIP) is an IP-based protocol defined in IETF RFCs 3261 and 2543, the entirety of which are expressly incorporated herein by reference. SIP is one of two dominant messaging protocols used by the VoIP industry.

[0050] Importantly, the VoIP Media Gateway/call server **112** converts the TDM or CDM protocol of the incoming switched network phone call to packet data using session initiation protocol (SIP), and vice versa, meaning that packetized VoIP information coming from a relevant PSAP is converted into a switched connection with the 911 caller, terminated at the VoIP call server **112**.

[0051] In step 5, the VoIP call server 112 holds the call while querying the VPC 130. The Invite is received by the VPC 130 for call routing instructions.

[0052] The VPC **130** is an application that determines the appropriate PSAP, based on the location of the 911 caller **101**, returns associated routing instructions to the VoIP network, and provides the call center's identity and the callback number to the PSAP through the automatic location identifier (ALI). (An ALI is a database that relates a specific telephone number to an address. This database accepts a PSAP query with a telephone number and responds with an address. In the case of an ESQK, the ALI database steers (redirects) the query to the appropriate VoIP positioning center and steers the response back to the querying PSAP).

[0053] A SIP Invite command may be used for the query from the Call Server **112** to the VPC **130**. The disclosed SIP Invite command preferably includes the following parameters:

[0054] a) The "from" field

[0055] =the dialed digits from the call center (NPAxxx-yyyy)

[0056] b) The "to" field

[0057] =911

[0058] c) The JIT CBN field

[0059] =callback number of the call center

[0060] In step 6, the VoIP positioning center **132** queries an ERDB (SLDB) **134** for call routing instructions based upon the dialed NPA-xxx-yyyy number. The ERDB **134** relates the dialed number to the address of that phone number (lat/lon of the PSAP jurisdictional centroid) and determines the appropriate PSAP to receive the call. Within the ERDB **134**, each phone number corresponds to a different PSAP.

[0061] In step 7, the ERDB 134 responds to the VPC 130 with the identity of the appropriate PSAP to serve the caller 101. The VPC 130 assigns an ESQK and emergency services routing number (ESRN) to the call and stages an ALI record. The ESRN is a 10-digit number that specifies the selective router to be used to route a call. The ALI record contains the phone number of the call center 104, based upon the ANI that accompanied the call. If the call center 104 is capable of sending the ANI of the actual end user, then this can be staged in the VPC ALI record.

[0062] Further call processing is otherwise per the conventional NENA i2 VoIP standard:

[0063] For instance, in step 8, the VoIP positioning center 130 assigns an emergency services query key (ESQK) appropriate to that PSAP, and stages a record with the call center CBN and call center company ID.

[0064] The VoIP positioning center **130** responds to the VoIP call server **112** with the ESQK, emergency services routing number (ESRN), and last routing option (LRO). (The

LRO is routing information sent by the VPC **130** that provides a "last chance" destination for a call, for example the contingency routing number (CRN) or a routing number associated with a national call center.

[0065] In step 9, the VoIP call server **112** uses the ESRN to route the call to the correct emergency services gateway (ESGW) **114**.

[0066] The VoIP call server **112** uses the received ESRN to determine the appropriate ESGW **114** and routes the call appropriately to the correct emergency services gateway (ESGW) **114**. The ESGW **114** uses the ESRN to determine the appropriate selective router **116**. For simplicity and clarity of description, only one ESGW **114** and one selective router **116** are pictured in FIG. **2**.

[0067] In step 10, the ESGW 114 performs media conversion by converting the SIP protocol (and vice versa in the opposite communication direction), and uses the ESRN to route the call to the correct selective router 116, along with the ESQK.

[0068] In step 11, the selective router 116 routes the ESQK to the PSAP 118.

[0069] In step 12, the PSAP 118 queries the automatic location identifier (ALI) database 120 using the ESQK.

[0070] In step **13**, the ALI database **120** steers the query to the VoIP positioning center (VPC) **130**, per previously provisioned steering tables. The VPC **130** responds with a staged record that includes the callback number (CBN) and call center company ID. In the preferred embodiments, no latitude/longitude (lat/lon) is sent in the ALI record, although such data could be forwarded if it is available.

[0071] In step 14, the ALI database 120 forwards the callback number (CBN) and call center ID to the requesting PSAP 118.

[0072] In accordance with the present invention, benefits are derived by routing 911 calls via the Enhanced E911 network. Moreover, PSAPs can utilize all available technologies available to them in an Enhanced E911 network such as CAD, selective transfer, etc. when responding to a call from a telematics or other call center.

[0073] The present invention makes possible the transfer of misrouted or defaulted VoIP calls from a VoIP default call center to the appropriate PSAP via the Enhanced E911 network. In conventional systems defaulted calls must be routed via the PSTN.

[0074] This invention saves taxpayers money by allowing PSAPs to discontinue designated PSTN lines. This invention also increases the speed with which emergency services (responders) can be dispatched and provides recorded documentation of conversations that are typically available on calls received via the E911 network, but not via the PSTN.

[0075] The present invention has particular relevance for use by any alarm monitoring company, telematics call center, or emergency call center that monitors incoming calls. The invention has significant benefit in the use by automotive roadside assistance call centers like OnStarTM, TeleAid, etc. **[0076]** While the invention has been described with reference to the exemplary embodiments thereof, those skilled in the art will be able to make various modifications to the described embodiments of the invention without departing from the true spirit and scope of the invention.

1-12. (canceled)

13. A method of providing a telematics call center with access to an Enhanced 911 network supporting a public safety answering point (PSAP), comprising:

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- receiving a forwarded phone call, initiated by an initiating wireless device, from a telematics call center;
- routing said forwarded phone call as an Internet Protocol (IP) based packetized phone call;
- querying a VoIP positioning center for call routing information to route said IP based packetized phone call to a particular PSAP, said VoIP positioning center query comprising a phone number of said initiating wireless device initiating said forwarded phone call;
- receiving said call routing information from said VoIP positioning center; and
- further forwarding said IP based packetized phone call both to said particular PSAP based on said call routing information.

14. The method of providing a telematics call center with access to an Enhanced 911 network supporting a public safety answering point (PSAP) according to claim 13, wherein said further forwarding comprises:

forwarding a Time Division Multiplexed (TDM) phone call via a dedicated trunk line to a selective router serving said particular PSAP.

15. The method of providing a telematics call center with access to an Enhanced 911 network supporting a public safety answering point (PSAP) according to claim **13**, wherein:

said Internet Protocol (IP) based packetized phone call is a session initiating protocol (SIP) packetized phone call.

16. The method of providing a telematics call center with access to an Enhanced 911 network supporting a public safety answering point (PSAP) according to claim **13**, wherein:

said telematics call center is ONSTAR $^{\rm TM}.$

17. The method of providing a telematics call center with access to an Enhanced 911 network supporting a public safety answering point (PSAP) according to claim **13**, wherein:

said telematics call center is ATX.

18. The method of providing a telematics call center with access to an Enhanced 911 network supporting a public safety answering point (PSAP) according to claim **13**, wherein: said telematics call center is Cross Country.

19. The method of providing a telematics call center with access to an Enhanced 911 network supporting a public safety answering point (PSAP) according to claim **13**, wherein:

said telematics call center is ADT.

20. The method of providing a telematics call center with access to an Enhanced 911 network supporting a public safety answering point (PSAP) according to claim **13**, wherein:

said telematics call center is an alarm monitoring center.

21. The method of providing a telematics call center with access to an Enhanced 911 network supporting a public safety answering point (PSAP) according to claim **13**, wherein:

said forwarded phone call is received via a public switched telephone network (PSTN).

22. Apparatus for providing a telematics call center with access to an Enhanced 911 network supporting a public safety answering point (PSAP), comprising:

- means for receiving a forwarded phone call, initiated by an initiating wireless device, from a telematics call center; means for routing said forwarded phone call as an Internet
- Protocol (IP) based packetized phone call; means for querying a VoIP positioning center for call rout-
- ing information to route said IP based packetized phone call to a particular PSAP, said VoIP positioning center query comprising a phone number of said initiating wireless device initiating said forwarded phone call;
- means for receiving said call routing information from said VoIP positioning center; and
- means for further forwarding said IP based packetized phone call both to said particular PSAP based on said call routing information.

23. The apparatus for providing a telematics call center with access to an Enhanced 911 network supporting a public safety answering point (PSAP) according to claim **22**, wherein said means for further forwarding comprises:

means for forwarding a Time Division Multiplexed (TDM) phone call via a dedicated trunk line to a selective router serving said particular PSAP.

24. The apparatus for providing a telematics call center with access to an Enhanced 911 network supporting a public safety answering point (PSAP) according to claim **22**, wherein:

said Internet Protocol (IP) based packetized phone call is a session initiating protocol (SIP) packetized phone call.

25. The apparatus for providing a telematics call center with access to an Enhanced 911 network supporting a public safety answering point (PSAP) according to claim 22, wherein:

said telematics call center is an alarm monitoring center.

26. The apparatus for providing a telematics call center with access to an Enhanced 911 network supporting a public safety answering point (PSAP) according to claim **22**, wherein:

said forwarded phone call is received via a public switched telephone network (PSTN).

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