

Geographical location information for emergency calls over VoIP networks

Providing accurate geographical location information for 911, 112, 999 and other popular emergency call numbers over VoIP networks

The Challenge

The decentralized architecture of VoIP networks is creating opportunities for more efficient and flexible implementations of telephony services for Service Providers and Enterprises. Services including IP-PBX or IP Centrex significantly cut telephony costs and at the same time offer rich set of new features for end users and IT managers.

The decentralized VoIP architecture creates a significant challenge with Emergency Calls initiated from Enterprises' remote branches and SOHOs. These systems may not accurately report the geographical location of the call's origination, which can result in dispatching emergency responders to a wrong location. This inaccuracy is due to the fact that calls in the remote branches and SOHOs are forwarded and handled through the IP PBX and its PSTN access point, located in either the HQ's or the Service Provider's premises. Therefore, emergency calls are forwarded to the HQ's or Service Provider's local PSTN network and handled by the wrong emergency dispatchers in a different jurisdiction. To overcome this obstacle the system should detect emergency calls and forward them to the local emergency services in the SOHO or the branch's region to be handled by the relevant dispatchers.

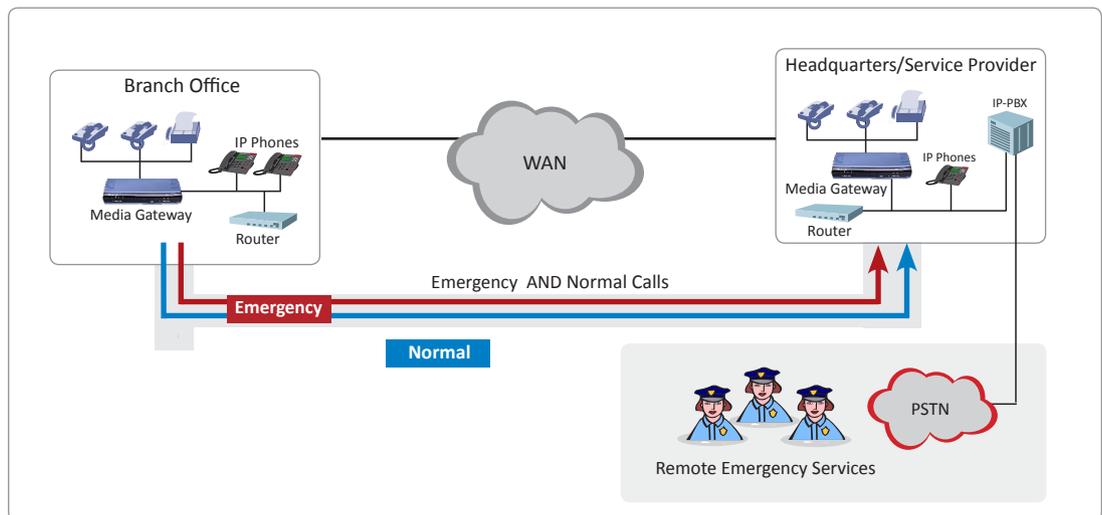


Figure 1 - All the Normal and Emergency calls are forwarded and handled by the HQ or the Service Provider IP-PBX

AudioCodes Solution for Emergency Calls in VoIP Telephony Services

AudioCodes overcomes the aforementioned challenge by leveraging advanced call routing, number manipulation and PSTN breakout (FXO, BRI, PRI) capabilities implemented in its Media Gateways.

By straightforward and intuitive configuration, the AudioCodes Media Gateway can detect national Emergency Call numbers (e.g. 911 and 112) and direct them via its local PSTN access lines towards the local PSTN. It ensures that the call will reach its correct destination in the proper geographical area, thereby avoiding any network ambiguity. Furthermore, the call details include all the relevant information required by the emergency staff to trace the caller, if necessary.

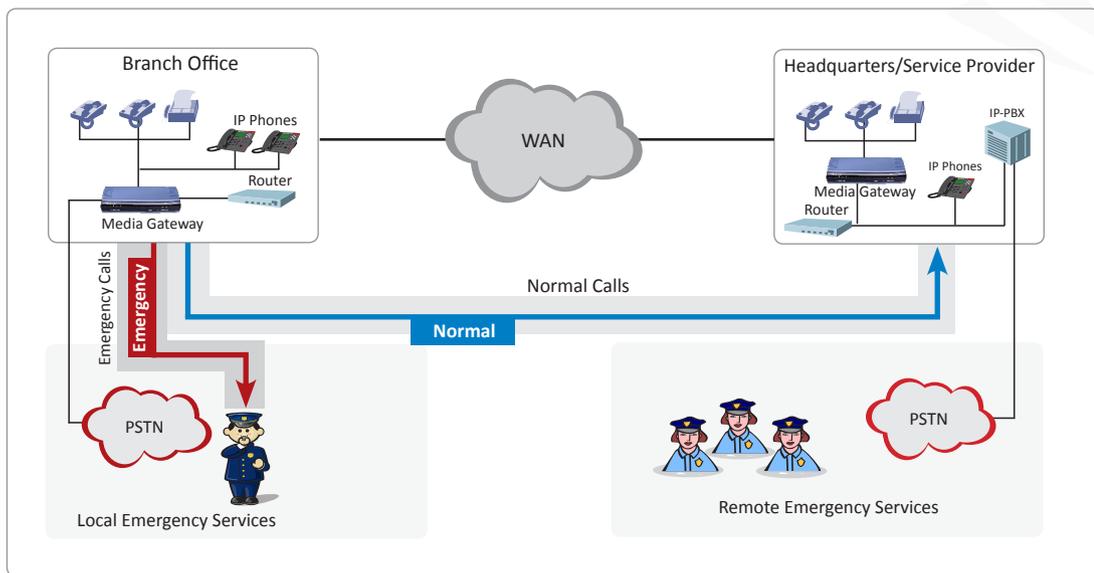


Figure 2 - Emergency calls are routed to the local Emergency services; while all the "Normal" calls are forwarded to the HQ or the Service Provider IP-PBX

Case Study: A Government Agency in North America

PSAPS (Public Safety Answering Point) is a local agency distributed throughout the United States, typically county or city-controlled, responsible for answering Emergency Calls for assistance from police, fire, and medical services. Calls are routed to regional PSAPs, according to addresses that are associated to them based on the caller's phone number (e.g., Automatic Number Identification).

AudioCodes Media Gateways are installed in a North American Government Agency network, routing emergency calls to the local PSAP, based upon its geographic location. Calls that are routed through AudioCodes Media Gateways include the caller information according to the PSAP regulatory requirements for caller identification and traceability.

Summary

An accurate report of the geographical location of the Emergency call's originator is paramount and cannot be compromised in both TDM and VoIP telephony networks. AudioCodes Media Gateways bridge TDM and VoIP networks, and can detect and reroute emergency calls to predefined destinations without interfering with normal call process.

For further information and to discuss the specific requirements for your VoIP networks architecture, please contact your local AudioCodes representative.

About AudioCodes

AudioCodes Ltd. (NasdaqGS: AUDC) designs, develops and sells advanced Voice over IP (VoIP) and converged VoIP and Data networking products and applications to Service Providers and Enterprises. AudioCodes is a VoIP technology leader focused on VoIP communications, applications and networking elements, and its products are deployed globally in Broadband, Mobile, Cable, and Enterprise networks. The company provides a range of innovative, cost-effective products including Media Gateways, Multi-Service Business Gateways, Residential Gateways, IP Phones, Media Servers, Session Border Controllers (SBC), Security Gateways and Value Added Applications. AudioCodes underlying technology, VolPerfectHD™, relies primarily on AudioCodes leadership in DSP, voice coding and voice processing technologies. AudioCodes High Definition (HD) VoIP technologies and products provide enhanced intelligibility, and a better end user communication experience in emerging Voice networks.

International Headquarters

1 Hayarden Street, Airport City
Lod 70151, Israel
Tel: +972-3-976-4000
Fax: +972-3-976-4040

AudioCodes Inc.

27 World's Fair Drive,
Somerset, NJ 08873
Tel:+1-732-469-0880
Fax:+1-732-496-2298

Contact us: www.audiocodes.com/info

Website: www.audiocodes.com

©2009 AudioCodes Ltd. All rights reserved. AudioCodes, AC, AudioCoded, Ardito, CTI2, CTI², CTI Squared, HD VoIP, InTouch, IPmedia, Mediant, MediaPack, NetCoder, Netrake, Nuera, Open Solutions Network, OSN, Stretto, TrunkPack, VoicePacketizer, VolPerfect, VolPerfectHD, What's Inside Matters, Your Gateway To VoIP and 3GX are trademarks or registered trademarks of AudioCodes Limited. All other products or trademarks are property of their respective owners.

Ref. # LTRM-09051 10/09 V.1

