



## Experient Case Study

Building 9-1-1 Systems for Small to Mid-sized Emergency Dispatch Centers using AudioCodes Media Gateways

### Background

Since 2002, Experient has been at the forefront of providing a true, IP-based, mission-critical 9-1-1 ANI/ALI Controller for Public Safety Answering Points (PSAPs) throughout the United States. Experient manufactures a range of ANI/ALI Controllers robust enough to work in virtually any size PSAP; the company's specialty lies in small to medium-sized PSAPs that dominate the Public Safety market (typically 2 to 15 positions). Founded in 2002, Experient Corporation is based in Denver, Colorado.

Small government agencies are growing increasingly dependent on 9-1-1 systems to dispatch emergency services (fire, police, ambulance, etc.) based on telephone calls from residents in their communities. Many are exploring the deployment of new 9-1-1 systems or upgrades to their existing systems to better serve their communities. The executives at Experient identified this opportunity to create a cost-effective 9-1-1 system for small and medium-sized municipal and county governments.

### Challenges

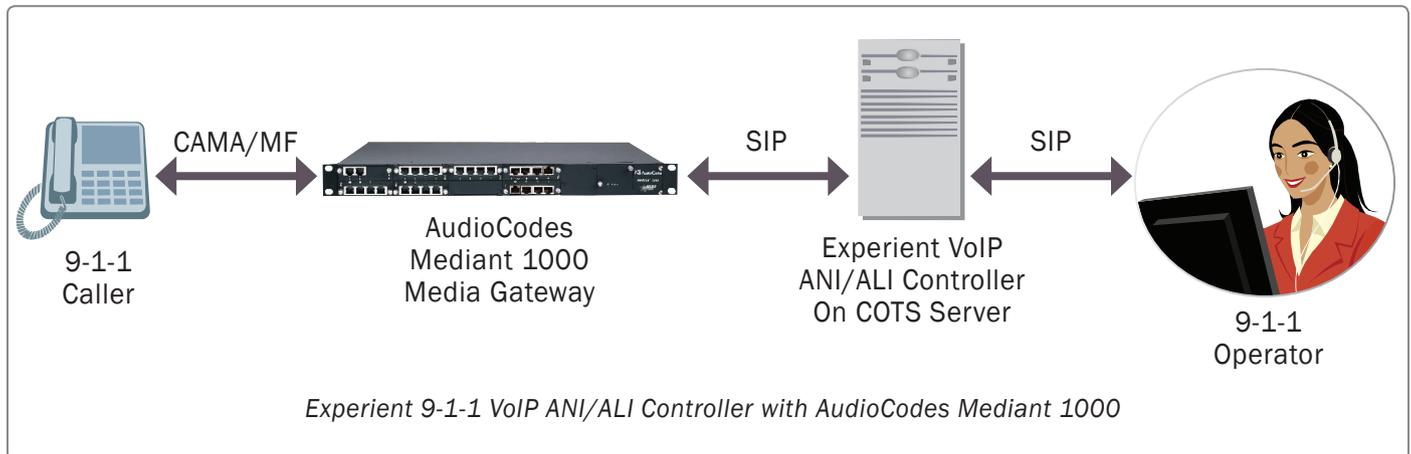
Most 9-1-1 systems depend on specialized CAMA/MF trunks that relay important location information from the caller to the PSAP, allowing the Public Safety dispatcher answering the call to obtain the address and other details about the caller. To this end, CAMA/MF trunks use protocol and signaling methods not commonly used in traditional PBXs or telephony equipment. As a result of these specialized protocols, many of the existing 9-1-1 system vendors use proprietary hardware that is expensive, difficult to maintain and, in some cases, approaching end of warranty and technical support from their manufacturers.

During the early stages of development, it was clear to the engineering team at Experient that using proprietary CAMA/MF interface hardware in their 9-1-1 ANI/ALI Controller would limit their design and significantly increase the cost of their system. The designers at Experient needed a cost-effective means to interface to CAMA/MF trunks that was standards-based and scalable.



## Solution

After surveying the market for a solution, Experient collaborated with AudioCodes to enhance the existing analog FXS interface capabilities of the Mediant 1000 media gateway with CAMA/MF signals, thereby converting the location information to SIP. This allows the development of an 9-1-1 VoIP ANI/ALI Controller based on SIP that uses commercial off-the-shelf (COTS) servers.



In this configuration, incoming 9-1-1 calls are routed from the PSTN into one of the Mediant 1000 CAMA/MF-enabled analog ports where the caller's information is extracted. From there, the call is converted to SIP, and a SIP Invite to the Experient VoIP ANI/ALI Controller software is initiated. Included in the invite is the caller's Automatic Number Identification (ANI) information, which allows the ANI/ALI Controller to retrieve the caller's location. This enables the 9-1-1 dispatcher to direct resources to the caller's location even when the caller is unable to talk or otherwise provide their location.

Because the Mediant 1000 gateway converts the information to SIP, the Experient VoIP ANI/ALI Controller software can operate on a commercial off-the-shelf (COTS) server, avoiding proprietary trunking PCI boards and dramatically reducing the system's hardware costs.

## Results

Experient systems using the AudioCodes Mediant Gateways are currently deployed in a number of small to mid-sized government 9-1-1 centers, and are handling urgent emergency service requests every day.

By using the Experient 9-1-1 system with AudioCodes, the typical medium-sized government can save more than \$100,000 compared to the cost of proprietary or legacy hardware-based systems — money that can go towards other much needed public safety equipment.

**“By working with AudioCodes media gateways, we are able to bring cost effective 9-1-1 solutions to small and medium sized communities with tight budgets and create a win-win situation for both Experient and the communities we service.”**

*Bill O'Neil President and CEO, Experient Corporation*

## **Future:**

In the near future, the engineers at Experient plan to integrate the PSAP software application on the embedded Mediant 1000 and Mediant 800 OSN servers – eliminating the need for two separate devices and creating a compact, one-box appliance for small agencies.

## **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 market leader focused on converged VoIP & data communications 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, Session Border Controllers (SBC), Residential Gateways, IP Phones, Media Servers and Value Added Applications. AudioCodes' underlying technology, VoIPerfectHD™, relies 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 Voice communications.

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